

## Snowmobiles and all-terrain vehicles

The Ski-Doo, designed and built by Bombardier, radically changed modes of transportation in northern Canada where the dog sled was the main means of travel. Snowmobiling is now a popular sport in Canada and parts of the U.S.



In 1922, a 15-year-old named Armand Bombardier from Valcourt, Quebec, came up with the idea of attaching an old airplane propeller and motor to a family sled and invented the *snowmobile*. By 1964, the perfected snowmobile had all but replaced the dog sleds of northern Canada and enabled many people in other parts of Canada and the world to enjoy winter travel.

The snowmobile led the way to a family of all-terrain vehicles, each developed to solve a specific transportation problem such as traversing the muskeg of northern Canada. Muskeg is a layer of dead plants that become moist in the summer and sink underfoot, making travel difficult. Roads often cannot be built on such terrain. Tropical countries with rain forest, swamp, and desert face similar problems.

To deal with these various environments, Canadian manufacturers such as Bombardier and Canadian Foremost have designed a family of *all-terrain vehicles* (ATVs) for world markets. Heavy tracked and wheeled ATVs can carry large loads of people and machinery — sometimes as much as 70 tonnes. They are used throughout the world for activities as varied as fighting fires in the U.S.S.R., laying powerlines in the Amazon Basin, surveying land in the Arctic, and installing pipeline in China and Peru.

The *Terra Bus*, manufactured by Canadian Foremost Limited, is an ATV that has been used to help move people from one area to another quickly and safely. Balloon-like low-pressure tires on these vehicles allow them to manoeuvre freely on all types of terrain, adapting with speed and ease from water to desert, from rocky bluffs to ice and snow. They do not damage environmentally sensitive terrain and are important for areas where low population makes the building of conventional roads uneconomical.



Another amphibious ATV, Terra Bus, built by Canadian Foremost can also negotiate all types of terrain.