

Seasonal Summary
For Eastern Canada
Winter 2005-2006



Produced by the Canadian Ice Service
June 1ST, 2006

Table of Content

| | |
|-------------------------------|----|
| Gulf of St. Lawrence..... | 3 |
| Freeze up..... | 3 |
| Break-up..... | 5 |
| East Newfoundland Waters..... | 9 |
| Freeze-up..... | 9 |
| Break-up..... | 12 |

Table of Figures

| | |
|--|----|
| Figure 1: Weekly Ice coverage for the Gulf of St Lawrence – 2005-06 ice season..... | 8 |
| Figure 2: Normalized ice coverage for the Gulf of St Lawrence for February 19 th | 8 |
| Figure 3: Weekly ice coverage for Newfoundland and Labrador – 2005-06 ice season..... | 14 |
| Figure 4: Normalized ice coverage for Newfoundland and Labrador for March 12 th | 14 |
| Figure 5: Departure from normal ice concentration and observed ice situation – December 19 th , 2005..... | 15 |
| Figure 6: Departure from normal ice concentration and observed ice situation – January 2 nd , 2006..... | 15 |
| Figure 7: Departure from normal ice concentration and observed ice situation – January 16 th , 2006..... | 15 |
| Figure 8: Departure from normal ice concentration and observed ice situation – January 30 th , 2006..... | 16 |
| Figure 9: Departure from normal ice concentration and observed ice situation – February 13 th , 2006..... | 16 |
| Figure 10: Departure from normal ice concentration and observed ice situation – February 27 th , 2006..... | 16 |
| Figure 11: Departure from normal ice concentration and observed ice situation – March 13 th , 2006..... | 17 |
| Figure 12: Departure from normal ice concentration and observed ice situation– April 3 rd , 2006..... | 17 |
| Figure 13: Departure from normal ice concentration and observed ice situation – April 17 th , 2006..... | 17 |
| Figure 14: Departure from normal ice concentration and observed ice situation – May 1 st , 2006..... | 18 |
| Figure 15: Departure from normal ice concentration and observed ice situation – May 15 th , 2006..... | 18 |

Gulf of St. Lawrence

Freeze up

The setup for the freeze-up period began in November where temperatures were near normal during the first half of the month however the mercury climbed to above or much above normal for the balance of the month. No ice formation had begun in the latter part of November.

The warm trend that began in the last half of November continued into the first two weeks of December. The temperatures were above normal over most of the Gulf except in the Northeast Arm where much above normal values prevailed. Moving into the latter part of the month, the temperatures were bumped back up to above normal territory. The exception was the Quebec City area where temperatures remained near or slightly below normal. The wind was generally moderate from the west or southwest during the first week but shifted to the northwest during the second. The third week saw the wind back to the west and finally the last week the winds veered from the northeast. Near the middle of the month, some new and grey ice began to form around the Quebec City area and drifted down the St Lawrence River. At the same time some coastal new and grey with some greywhite ice formed in the small bays of the New Brunswick and Prince Edward Island coast. A narrow band of new and grey ice also formed along the North Shore of Quebec. By the end of the third week, some new ice formed in Chaleur Bay. Patches of new ice formed along the Nova Scotia Coast in Northumberland Strait. At the end of the month, the ice in the St Lawrence Estuary reached out to Pointe des Monts with some patches of new ice in east of Pointe des Monts towards the Honguego Passage. The smaller bays in Chaleur Bay and along the New Brunswick and Prince Edward Island coasts had fast ice with isolated patches of new and grey. A bit of new ice had formed in the bays along the western shore of Newfoundland while the north shore of Quebec had fast ice in the bays along most of the shore with narrow bands of grey and new ice further offshore. Elsewhere in the gulf, mainly open water with ice free conditions in the central portion of the gulf. Overall the ice coverage at the end of December was less than normal. The exception was the river and estuary where concentrations were greater than normal. This was the result of colder than normal temperatures over the river area. Ice growth was fostered and drifted down river to the estuary area (Figure 6).

For the month of January, temperatures remained much above normal for the entire period. Winds for the first week were light from the northeast and switched to light southwest during the second. During the third week the winds veered to moderate west or northwest. And finally during the last week of the month winds were moderate to strong from the north. Despite the warmer than normal temperatures for the month, grey and new with some greywhite ice continued to expand from the St Lawrence River and into the Honguedo Passage during the first week and part of the second week of January. Ice in Chaleur Bay expanded and covered the southern two thirds of the bay during the same period. The grey and new with greywhite ice along the New Brunswick

coast also expanded about 5 to 10 miles offshore during the first 10 days of the month. The small bays were covered with fast ice along both New Brunswick and Prince Edward Island coasts. The North Shore of Quebec also had a band of new ice that extended between 7 to 15 miles offshore with fast ice in the bays along the coast. Temperatures from around the 10th to the middle of the month remained near or above the freezing mark. As a consequence, a significant amount of ice was melted or destroyed. At the middle of the month, the grey and new ice with some greywhite ice in the St Lawrence River had regressed south of the line from Forestville along the northern shore to near Cap Chat along the southern shore. In the Honguedo Passage, some greywhite, grey and thin first year ice covered the area. Chaleur Bay had some loose grey and greywhite ice with fast ice in the small bays. The fast ice in the small bays of New Brunswick, Prince Edward Island and the North Shore of Quebec remained intact. Some isolated bands of grey and greywhite ice persisted around Prince Edward Island and along the North Shore of Quebec. During the last half of the month, temperatures still remained above normal; however, the region was also entering the coldest time of the year from a climatology perspective. The outcome was the mitigation of the ice growth over the Gulf. Throughout the last two weeks of January, ice had formed again in the St Lawrence River and drifted eastward along the Gaspé Peninsula. At the end of the month, mostly greywhite and thin first year ice was located along the southern shore of the river along the Gaspé Peninsula and stretched all the way to the north-eastern entrance of Chaleur Bay. Further north in the river mostly new and grey ice with some patches of open water covered the area. In Chaleur Bay, along the New Brunswick coast and all of the Northumberland Strait were covered with grey and greywhite ice. Some new ice also formed around the Magdalen Island coast. Significant expansion occurred during the last two weeks of January in the Northeast Arm so that by the end of the month the new and grey ice edge was located about 70 miles southwest of Belle Isle Strait. A band of greywhite and thin first year ice in the southern portion of Belle Isle Strait extended south-westward along the Newfoundland coast about 30 miles southwest of Belle Isle Strait. Within 5 to 20 miles of the North Shore of Quebec, the ice was mostly new and grey. The area around Anticosti Island and in the bays along the western coast of Newfoundland had some new ice. Elsewhere in the gulf, conditions were open water with ice free in most of the central portion of the gulf. It came as no surprise the Gulf of St Lawrence had much less than normal ice extent at the end of January. The production of ice was essentially stifled by the much warmer than normal temperatures. The end result was less than normal ice extent (Figure 8).

The temperature situation during the month of February over the Gulf of St Lawrence continued from where January had left off. The first half of the month saw the region bathed in above normal temperatures but cooled off to near or below normal values for the last half. Winds were light from the southeast over the first week but backed from the northeast with moderate winds for the next two weeks. The last week of the February continued with winds from the northwest however the winds were more in the moderate to strong category. Generally, a slow expansion of the ice edge occurred during the first part of the month. The St Lawrence River and Estuary as well as the western part of the Honguedo and Jacques Cartier Passages were covered with mostly new and grey ice at mid-February. The coastal area along the southern part of the river

and the northern portion of the Gaspé Peninsula had a band of grey and greywhite with some brash ice extending about 5 to 15 miles from the shore. Chaleur Bay had mostly new ice in the northern two thirds of the bay with grey and greywhite in the southern part. Within 60 miles of the northern shore of New Brunswick and within 25 miles of the northern part of the north shore of Prince Edward Island, mostly grey and new with some greywhite ice covered these areas. Mostly grey and new ice with patches of greywhite and thin first year ice stretched over Northumberland Strait at mid-month. Within 5 miles of the southern shore of the Magdalen Islands as well as parts of Bras d'Or Lake, generally new ice prevailed over those areas. The Northeast Arm region, within 40 miles of the North Shore of Quebec, was covered with thin first year and greywhite ice. Some medium first year ice was observed in Belle Isle Strait and the northern part of the Northeast Arm. No significant change occurred to the fast ice in the small bays. The central part of the Gulf was still ice free with open water near the ice edge. During the second part of February, ice expansion increased significantly from northwest to southeast. The ice edge ran from around Cap North on Cap Breton Island to near Heath Point on Anticosti Island to around Port au Choix along the western shore of Newfoundland. The St Lawrence River and Estuary were still primarily covered with new and grey ice except along the Gaspé Peninsula where greywhite and thin first year ice with some brash ice extended about 5 miles from the shore. The exception was in the Honguedo Passage where the more difficult ice extended about 15 to 25 miles from the north-eastern part of the Gaspé Peninsula. The south-western part of the gulf was covered with mostly grey and new ice. Areas of greywhite and thin first year ice in the northern part of the Northumberland Strait extended eastward into the St Georges Bay area, along the western coast of Cape Breton Island. As well, there was a band of greywhite ice in south-eastern Chaleur Bay. The north-western shore of Prince Edward Island, near the northern entrance to Northumberland Strait, was covered with thin first year ice. The Northeast Arm as well as the North Shore of Quebec were also covered with new and grey ice. The only area that had significant ice was the southern part of Belle Isle Strait and the north-western coast of Newfoundland to about Port au Choix. Mostly thin first year and greywhite with some medium first year ice covered this area. Some areas of new and grey ice had formed in the bays and inlets of western Newfoundland with some fast ice in the smaller bays. Elsewhere mainly open water to ice free conditions prevailed. The less than normal ice extent depicted in Figure 10 was a result of the very mild temperatures experienced in the month of January and the first half of February. Cooler temperatures did invade the area however the duration and intensity were not enough to erase the gains made earlier in the ice season.

Break-up

Temperatures recovered to above normal values during the first week of March except in the south-western part of the Gulf of St Lawrence as well as the Estuary. In these areas the mercury remained near to below normal for the same period. During the second week, the entire area was bathed in very much above normal values. By the third week, the estuary and the south-western part of the gulf were once again in a near or slightly below normal temperature regime while the rest of the gulf had above normal temperatures. Generally a moderate to strong north-westerly flow prevailed over the gulf

region during the first week; however, by the second week the winds were light and variable. By the third week, a return to a north-westerly circulation, albeit somewhat weaker than the first week. The last week of the month was characterized by a light to moderate north-easterly flow. Significant deterioration of the ice pack occurred during the first week due to the moderate to strong north-westerly circulation over the area. Huge open water leads developed along the north shore stretching from the river and estuary all the way to the entrance to Belle Isle Strait. Other areas where leads developed were in the Chaleur Bay and Northumberland Strait. The winds also drove the ice around Cape North on Cape Breton Island and into the western part of Cabot Strait. By the middle of the month, only loose patches of thin first year and greywhite ice remained in the river and estuary as well as the Honguedo Passage. The northern portion of Chaleur Bay was open water with a band of greywhite and thin first year ice in the south-eastern part of the bay. The northern New Brunswick and Prince Edward Island coasts as well as most of Northumberland Strait were open water. The south-western shore of Prince Edward Island had bands of thin first year and greywhite ice. The south-western portion of the gulf had varying concentrations of mostly greywhite and grey ice with some thin first year ice. Near the north-western shore of Cape Breton Island, a band of thin first year and greywhite with some medium first year ice extended about 3 to 8 miles from the shore. Some greywhite and thin first year ice had persisted in the western part of Cabot Strait but remained offshore in the Sydney area. The other location with mobile ice was in the Northeast Arm where mostly thin first year ice had prevailed. The entire North Shore of Quebec was open water. The area of open water in the Northeast Arm area only extended about 10 to 25 miles from the North Shore. Elsewhere mainly open water to ice free conditions prevailed at the middle of March. The general deterioration that occurred in the first half of the month continued into the second half. By the end of the third week all of the river and estuary was open water except for a very narrow band of thin first year ice along the southern shore. The Honguedo Passage was virtually open water. Most of Chaleur Bay was open water except for the south-eastern portion of the bay where a narrow strip of thin and medium first year ice still prevailed. The south-western part of the gulf had areas of loose thin first year and greywhite ice. The western and central part of Cabot Strait continued to have patches of thin first year and greywhite ice. Some ice had approached the Sydney area. The northern portion of the Northeast Arm was covered with thin and medium first year ice with a trace of old ice in the Belle Isle and extreme northern portion of the Northeast Arm. The North Shore of Quebec was generally open water west of a point 30 miles east of Natashquan. From 30 miles east of Natashquan eastward into the Northeast Arm, a narrow band of medium first year and brash ice prevailed. The rest of the gulf was open water to ice free. By the end of the month, all that remained of the ice in the river and estuary were patches of rotten fast ice along the shore. Most of Chaleur Bay was open water except for some patches of rotten fast ice around Miscou Island and the extreme western part of the bay. The south-western part of the gulf was generally open water with a few isolated strips of rotten medium first year ice. Most of the fast ice still prevailed along the shore however it was in an advanced state of rotting. Bands of thin first year ice were still observed along the eastern shore of Cape Breton Island. A general loosening of the ice pack had occurred in the Northeast Arm while concentrations in the Belle Isle Strait remained high. From Cape Whittle westward, the

North Shore was open water. Elsewhere open water to ice free prevailed. The ice situation at the end of the March continued the trend observed during the entire season; significantly less than normal ice extent over the Gulf (Figure 12). Since the ice coverage was less than normal for the freeze-up season, the break-up season had a head start.

Most of the month of April was above to very much above normal in terms of temperature however the last week saw a return to more normal values. Winds were light to moderate from the southeast during the first week but shifted to a moderate south-westerly flow during the second. During the third week, a moderate to strong north-easterly wind buffeted the entire gulf. And finally, the last week of April saw the circulation shift back to the west and eased up to only light to moderate in speed. Early in the first week of April, all of the fast ice in the river and estuary was completely gone. All of the floating ice in south-western Gulf of St Lawrence had also melted during the first week of April. The only ice that remained was the fast ice in the small bays. Shortly after the middle of the month the entire south-western portion of the gulf was free of ice. In the meantime, the ice in the Northeast Arm continued to shrink and loosen. During the third week of April, the remaining ice began to drift westward along the North Shore of Quebec however by the end of the month the entire gulf was generally open water to ice free. The open water to ice free conditions in the Gulf of St Lawrence were about two to three weeks earlier than normal (Figure 1 and Figure 14).

As witnessed by Figure 1, this year's ice season had less than normal ice extent. In fact, at no time during the entire season did the ice coverage exceed the normal coverage. The mild temperatures which prevailed over the area for a six week period running from late December to early February had completely taken the wind out of the "ice making" sails. As for where this year stacked up against previous season, Figure 2 shows that February 19, which corresponds to the maximum ice coverage during a normal ice season, was the lowest since 1969.

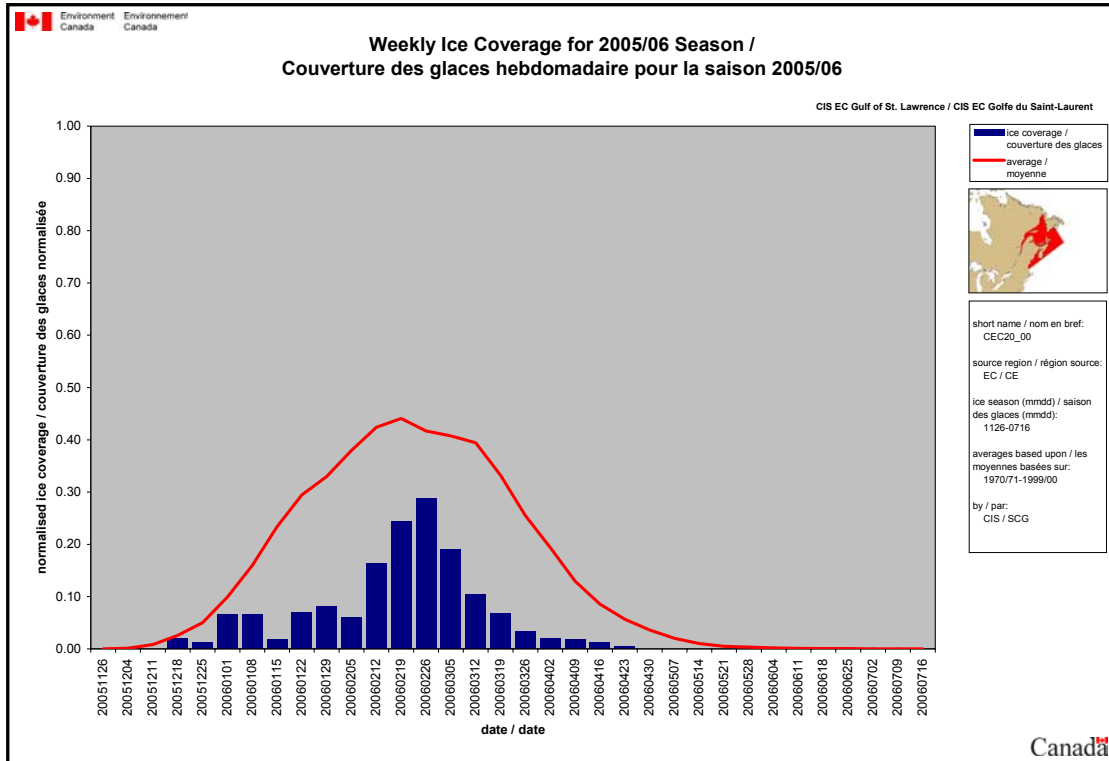


Figure 1: Weekly Ice coverage for the Gulf of St Lawrence – 2005-06 ice season.

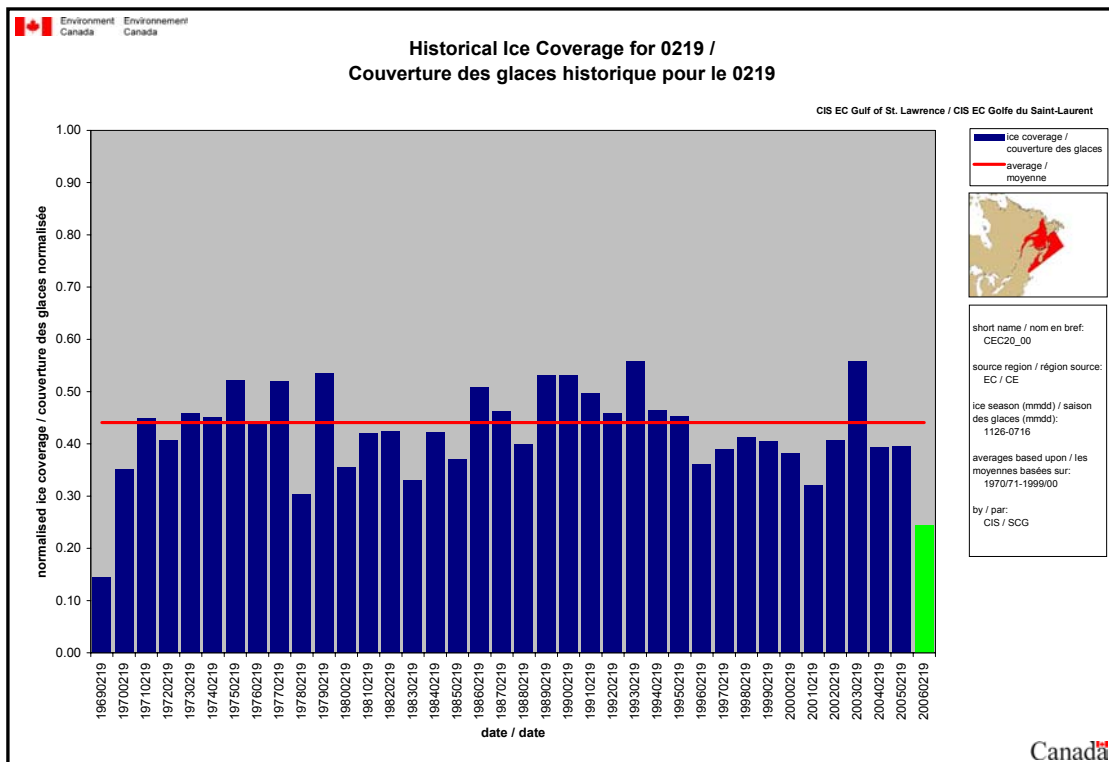


Figure 2: Normalized ice coverage for the Gulf of St Lawrence for February 19th.

East Newfoundland Waters

Freeze-up

Temperatures during the first week of November were just below normal but bounced back to above normal during the second. During the last half of the month, temperatures were above to much above. The circulation during the first week was light to moderate from the northwest while the second week had light and variable conditions. The second half of November had moderate south-westerly winds over the entire area. No significant ice growth occurred during the month.

Above normal temperatures had covered the Newfoundland area during the first week while the Labrador coast had experienced very much above normal values during the same period. By the second week, the entire region had above or much above normal values except in the northern portion of Labrador where near normal temperatures prevailed. The third week had generally near normal temperatures throughout. And finally, the last week of December had much above normal temperatures over Newfoundland while all of Labrador had near to below normal readings. Winds during the first week of December were moderate south-westerly over Newfoundland and light to moderate north-easterly over Labrador. The second and third weeks had moderate westerly winds over the entire area. And finally the last week saw a light to moderate north-westerly flow over Labrador and north-easterly circulation over Newfoundland. As a result, the first week had only some new ice form in the extreme western portion of Lake Melville which spread to cover the entire lake by the middle of the month. Elsewhere some new ice began to form along the northern shore of Labrador during the first week of December. With a return to more normal temperatures during the third week, the new ice along the northern shore of Labrador had spread southward and eastward. At the end of the third week, the southern ice edge was near Cartwright and extended about 15 to 30 miles from the shore. Lake Melville was covered with grey and new ice with fast ice over the extreme western portion of the lake. At the end of the month, the ice in northern Labrador, north of Saglek, extended about 110 miles of the shore with mostly greywhite and thin first year ice. Further south along the rest of the Labrador shore the grey and new ice extended about 20 to 40 miles from the shore with fast ice in the small bays. New and grey ice also formed in the bays of the Northern Peninsula of Newfoundland as well as around the western portion of Notre Dame Bay. Elsewhere mainly open water to ice free conditions prevailed except for bergy water north of 55N and west of about 57W. The ice concentration and extent along the Labrador coast was less than normal at the end of December (Figure 6). This was hardly a surprise as milder than normal temperatures managed to keep ice growth in check. The only rogue areas were the south-western part of Notre Dame Bay and some isolated areas along the southern Labrador coast.

The temperature regime during the entire month of January was above to much above normal. During the first three weeks of the month, winds were quite persistent from the northwest and were generally light to moderate. The last week had moderate to strong winds from the north. The ice along the northern portion of Labrador during the first

week of January extended 110 miles from the shore from Nain northwards. The area of ice was comprised mostly of greywhite and grey with some thin first year ice. Further south along the rest of the Labrador coast, grey and greywhite ice stretched out between 10 to 50 miles from the shore. Fast ice covered the coastal areas. Lake Melville became completely fasted with greywhite and grey ice during the first week of January. Some new ice still prevailed along the Northern Peninsula as well as in Notre Dame and Bonavista Bays. By the middle of the month, the ice extent had increased between 80 and 120 miles from the northern Labrador shore while the central portion of the Labrador coast had mostly greywhite and thin first year ice north of Groswater Bay. Looser grey and greywhite ice was present further south which included Belle Isle Strait and extended about 40 to 70 miles from the southern Labrador shore. The Lake Melville fast ice had thickened to greywhite ice. Some new ice still persisted along the Northern Peninsula, Notre Dame Bay and in Bonavista Bay. Small patches of fast ice were present in the small bays along the Newfoundland coast from Bonavista Bay north-westwards. The rest of the month saw the ice extent decrease due to northerly winds which caused melting and ice destruction. At the end of January the ice extent along the northern part of the Labrador coast was 120 miles from the shore, about 60 miles at mid-coast and 30 miles along the southern shore. Along the entire length of the Labrador coast, mainly thin first year ice with some medium first year ice was observed while near the ice edge the ice was mainly loose grey and greywhite. Belle Isle Strait was covered with thin and medium first year ice except for new and grey ice in the northern portion of the strait. The ice from the Labrador coast drifted along the Northern Peninsula to just north of Notre Dame and White Bays. The grey and greywhite ice extended about 30 to 50 miles from the peninsula. Along the shore from the Notre Dame Bay to the northern portion of Conception Bay, looser new ice covered these areas with a band of grey and greywhite ice from Fogo Island eastward to about 30 miles. Elsewhere open water to ice free with bergy water north of 5540N and west of about 5830W. The incredible warmth that bathed the entire region certainly manifested itself in the departure from normal ice chart (Figure 8). The very large area of less than normal ice concentration and extent at the end of the month of January indicated a significant deficit.

Temperatures were much above normal during the first week but cooled off to above normal for the second week of February. During the third, much above normal values covered Newfoundland; however, a below normal temperature regime prevailed over the Labrador area. For the last week of the month, below normal values characterized the entire region except for the northern portion of Labrador where above normal values covered that area. Winds were generally light and variable for the first week of the month; however, by the second and third weeks, winds increased to moderate from the northwest. For the final week of February, the winds were moderate from the northeast along the northern and central part of the Labrador coast and shifted from the northwest over the rest of the region. During the first half of the month the ice continued to evolve in terms of ice thickness. At the middle of the month, the ice extent was about 110 miles from the shore along the northern and central part of the Labrador coast and about 60 miles from the southern coast. The southern ice edge had also reached the northern part of Notre Dame Bay. The ice closer to the northern and central part of the Labrador

coast was mostly thin and medium first year ice with looser greywhite and thin first year ice along the ice edge. The southern Labrador coast and the northern part of Newfoundland had thin first year and greywhite ice near the shore with looser greywhite and grey ice with some thin first year ice near the ice edge. Within about 10 to 20 miles of the Northern Peninsula, the southern part of Notre Dame Bay and into Bonavista Bay, mainly new ice covered these areas. The southern edge of the trace of old had drifted down to about 5620N while the iceberg limit had reached 5440N. During the latter part of the month the ice edge along the central and northern part of the Labrador coast had retreated towards the shore so that it extended only about 60 miles at the end of the month. Along the southern shore, the ice edge was located about 110 to 160 miles offshore. The southern ice edge had gone south of Cape Freels and was in line with Cape Bonavista. The ice edge from the Northern Peninsula coast was located about 150 miles offshore while the edge further south was about 50 miles east of Cape Bonavista. The ice was mostly thin and medium first year ice along the shore with a trace of old ice from Groswater Bay northward. Looser greywhite and thin first year ice was present along the ice edge. The area from the southern Labrador coast southward to Newfoundland had mostly thin and medium first year ice. The exception was within 20 to 50 miles of the Northern Peninsula, Notre Dame Bay and in Hamilton Sound where mostly new and grey ice prevailed. The iceberg limit had drifted south and was located at about 5320N at the end of the month. Despite some cooler temperature during the second half of the month, the ice concentration and extent did not recover to normal values. The most remarkable departures were observed over the southern half of the region where the southern ice edge was located a good 80 miles north of its traditional position (Figure 10).

The temperature regime during the first two weeks of March was above normal over Newfoundland however shot up to much or very much above normal over Labrador. Winds were moderate to strong from the northeast over Labrador and light to moderate from the north for Newfoundland during the first week while the pattern weakened to light or moderate winds from the northeast during the second week. Over the entire area, the north-easterly winds over the Labrador area continued to maintain the ice edge relatively close to the coast. The ice edge was between 30 and 70 miles east of the coast in the northern and central part of the Labrador coast at mid-March. Further south the ice area broadened out to 100 miles and became somewhat looser. The ice along the northern and central part of Labrador had medium and thick first year ice with a trace of old ice while south of Groswater Bay the ice was mostly medium and thin first year ice with a trace of old. The southern extent of the trace of old ice was located near 5020N while the southern ice edge was located near 4820N about 40 miles southeast of Cape Bonavista. Generally looser ice conditions prevailed from Fogo Island south-eastward to the southern ice limit. Areas of bergy water developed during the last few days of the second week in White Bay, southeast Notre Dame Bay and Hamilton Sound. The ice berg limit was located near Cape Freels and extended north-eastward.

Break-up

The temperature regime during the third week of March was above normal over Newfoundland and warmer still over Labrador where much or very much above normal values bathed the area. During the last week of the month, temperatures cooled off to near normal over Newfoundland and above normal over Labrador. By the third week, the winds increased again to moderate or strong from the northeast over Labrador while the Newfoundland area had light to moderate easterlies. The last week of the month had light and variable winds over Labrador while the Newfoundland region had light to moderate northerly winds. The north-easterly winds continued to compress the ice edge over the entire length of the Labrador coast as well as Newfoundland. Generally the extent was between 40 to 60 miles except along the southern part of Labrador where the eastward ice extent was down to 5 or 10 miles. With weaker and variable winds during the last week of the month, the ice became more defuse. At the end of the month the ice extent was up to 120 miles from the coast in northern Labrador, 90 miles for the coast along the central and about 20 miles along the southern part of the Labrador coast. The ice pack over the Newfoundland area had decreased significantly since the middle of the month. The ice was about 10 miles from the northern portion of the Northern Peninsula to about 50 miles east along the southern part of the peninsula. Some ice was still present in Notre Dame Bay with higher concentrations located in the southern part of the bay. Strips of ice within 30 miles of the coast extended from around Fogo Island to just north of Cape Bonavista. Bonavista Bay remained bergy water. The ice berg limit was located just south of Cape Bonavista and extended eastward for about 60 miles then changed direction towards the north. The ice along the Newfoundland and Labrador coast was mostly medium and thick first year ice with a trace of old ice. Looser ice conditions were located along the ice edge. The departure from normal chart (Figure 12) clearly illustrated the hasty retreat of the ice towards the north even at this early phase of the break-up. The only area that showed greater than normal ice concentration was along the Northern Peninsula.

Temperatures were above to much above normal during the first two weeks of April over the entire area. During the third week, the mercury was near normal over Newfoundland and much above normal over Labrador. The last week returned to above or much above normal values over the entire area. Winds during the first week of April were moderate from the south over Newfoundland and light to moderate from the northeast over Labrador. During the second week, the winds shifted from the southwest and were light to moderate. By the third week, Newfoundland and southern Labrador was affected by moderate winds from the northeast whereas the central and northern portion of the Labrador region was under the influence of light to moderate north-westerly winds. And finally the last week of April had moderate south-westerly winds over the entire area. A significant decrease in ice extent occurred over Newfoundland and the southern Labrador region during the first week of April while the central and northern section of Labrador remained somewhat static in terms of extent. By the middle of the month, the ice extent was about 100 miles east of the northern and central part of Labrador. Just east of Groswater Bay, the ice extended about 180 miles east. The southern extent of the ice was located near 5310N. No floating ice was present

from that point southward to just north of Belle Isle Strait. The ice in the southern part of Belle Isle Strait stretched eastward for about 60 miles. The ice around the Newfoundland area was about 10 to 30 miles east of the Northern Peninsula and north of Notre Dame Bay. The eastward extent of the ice reached 6240W at its furthest point. Some rotting thin first year ice was still present in the smaller bays around Notre Dame Bay. The ice over the entire region was mostly medium and thick first year with a trace of old ice. During the second half of April, a general decrease in ice concentration continued over Newfoundland so that by the end of the month virtually all of the ice had melted. The south-westerly winds during the last week of the month caused the ice along the Labrador coast to drift offshore and created some bergy water leads along the coast and fast ice edge. The rest of the ice pack had loosened significantly during the period. At the end of the month, the ice edge was located about 120 miles east of the Labrador shore with the southern extent situated near 5310N. From Groswater Bay south-eastward along the southern Labrador Coast, conditions were generally bergy water while the coastal area still had fast ice in the small bays. Lake Melville was still fast at the end of the month. Figure 14 illustrated quite well the effects of warmer than normal winter season. Almost all differences indicated a lack of ice. The exception was the area east of Groswater Bay where some greater than normal ice concentration was observed.

Temperatures were much above to very much above normal over the entire area during the first week. During the second week temperatures dropped down to near or below normal over Newfoundland and very much above normal over Labrador. By the third week, temperatures were above normal over the entire region. Winds over the entire area were light from the southwest during the first week of May but shifted from the southeast during the second and third weeks. The ice pack continued to loosen especially in the southern portion. By the end of the first week of May the fast ice in Lake Melville had begun to fracture. By the middle of the month all of the fast ice had fractured with the western end of the lake being mainly open water. The southern ice edge had retreated to around 5520N with patches of ice further south. The extreme southern end of the patches of ice was located north of 5300N. An area of bergy water began to develop along the shore from around 5520N to about 5830N. By the end of the third week of May, the southern ice edge had retreated to north of 5500N. In Lake Melville, all of the ice was melted during the third week and gave way to water conditions.

The weekly ice coverage graphic (Figure 3) points out quite clearly that at no time during the pass season did the ice extent ever approached normal values (red line). We can easily see that after January 15th the ice coverage had actually decreased for the next two weeks. At that point the gap between the normal ice coverage and the observed ice coverage was too great to close.

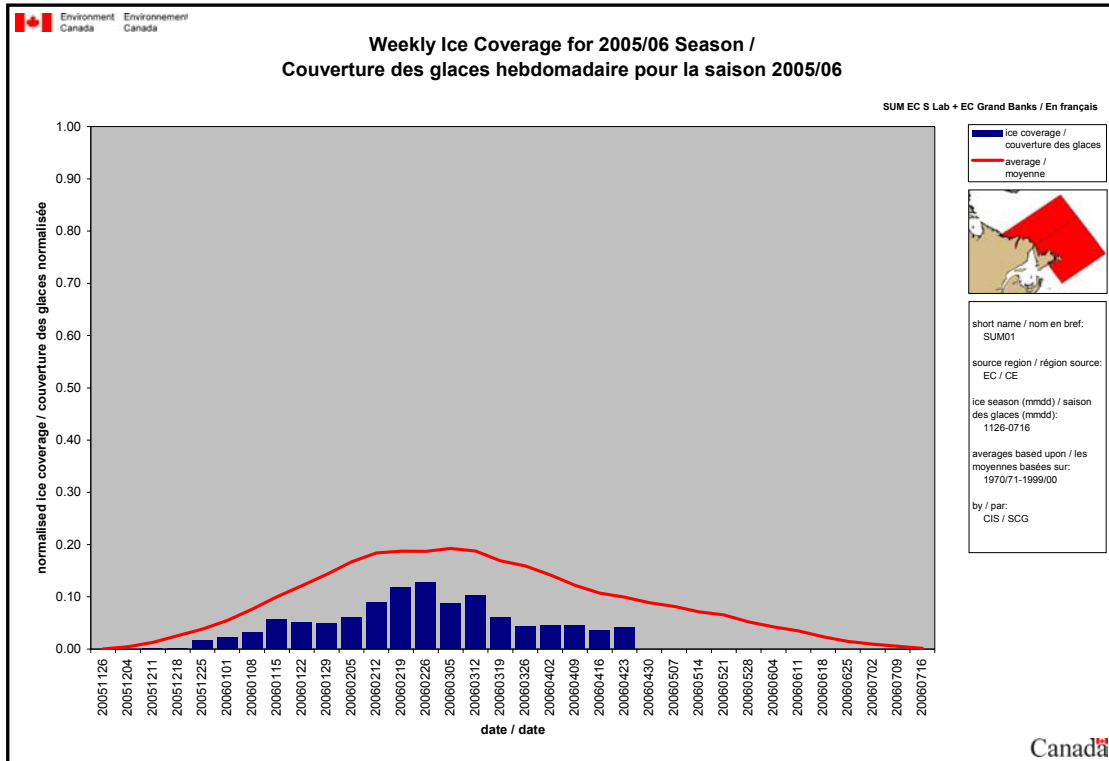


Figure 3: Weekly ice coverage for Newfoundland and Labrador – 2005-06 ice season.

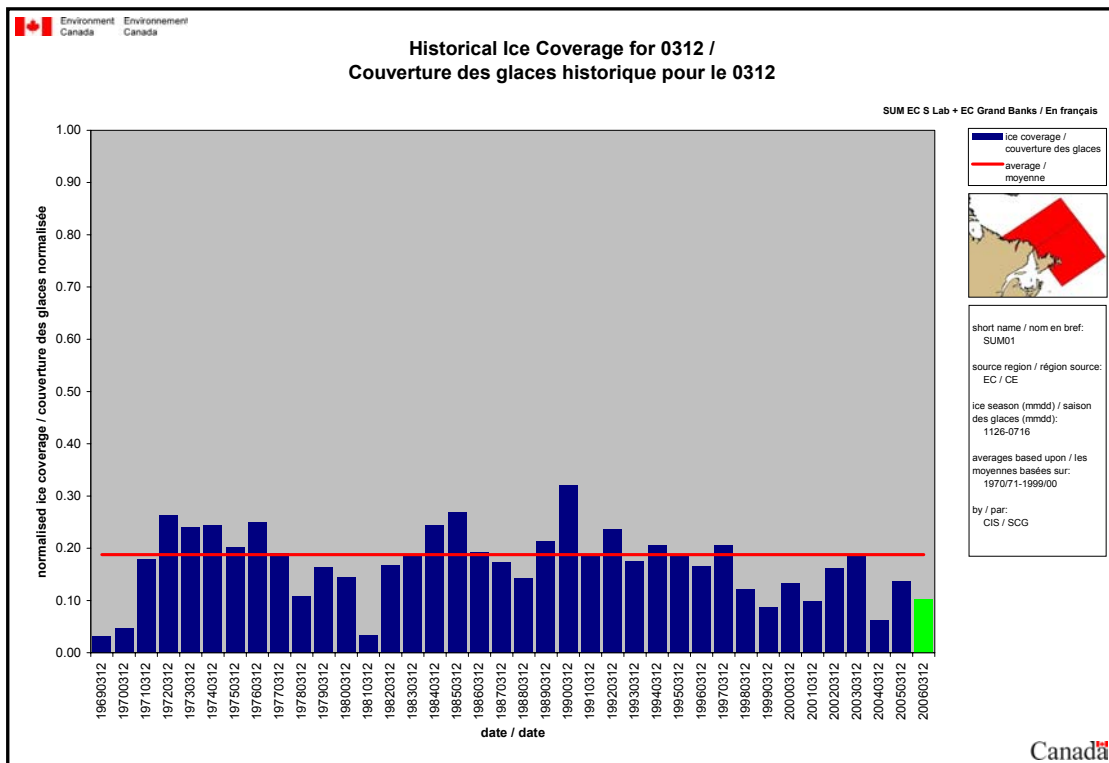


Figure 4: Normalized ice coverage for Newfoundland and Labrador for March 12th.

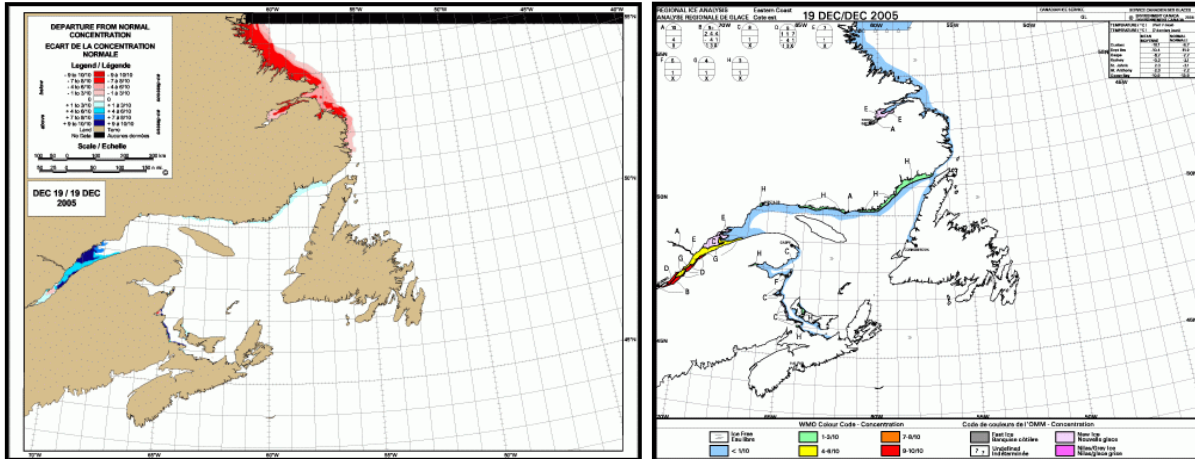


Figure 5: Departure from normal ice concentration and observed ice situation – December 19th, 2005.

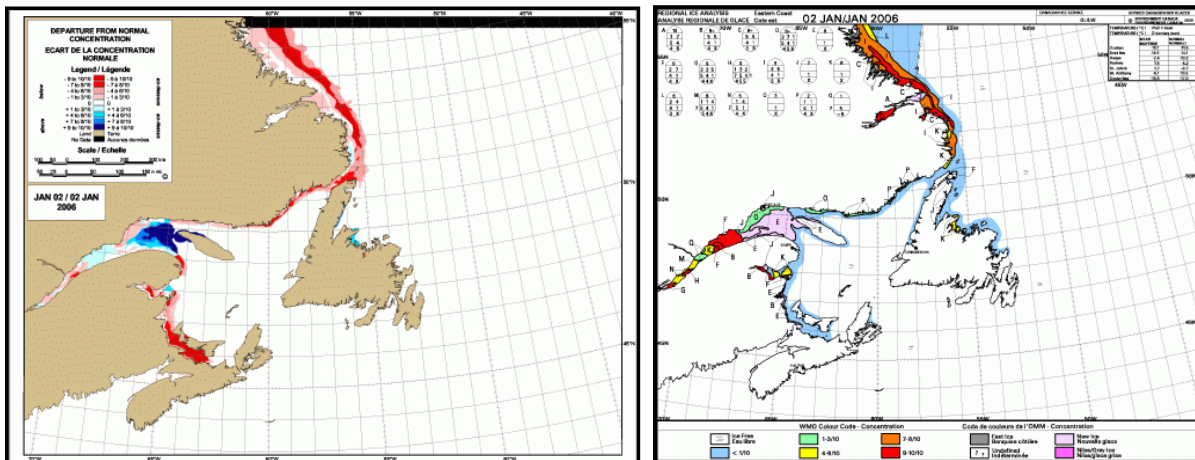


Figure 6: Departure from normal ice concentration and observed ice situation – January 2nd, 2006.

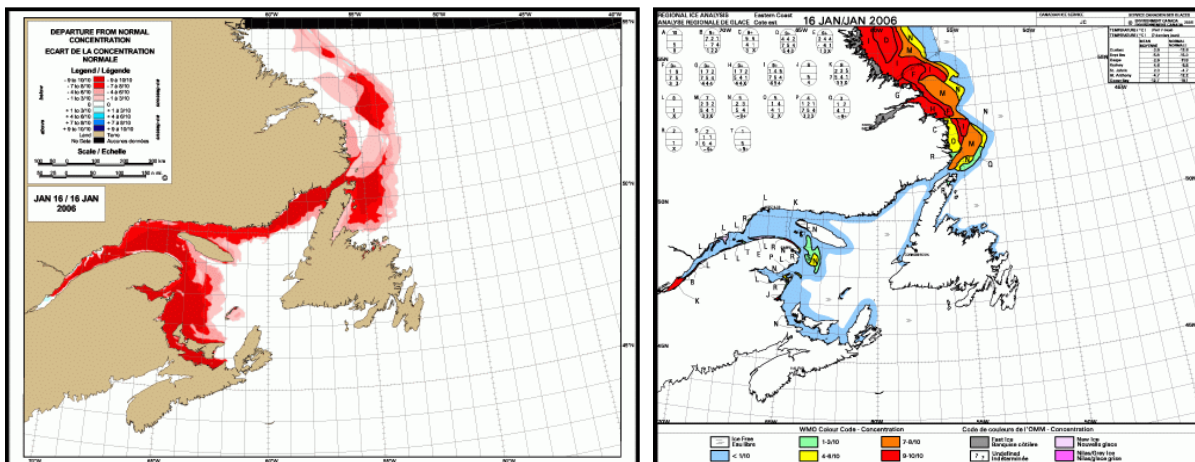


Figure 7: Departure from normal ice concentration and observed ice situation – January 16th, 2006.

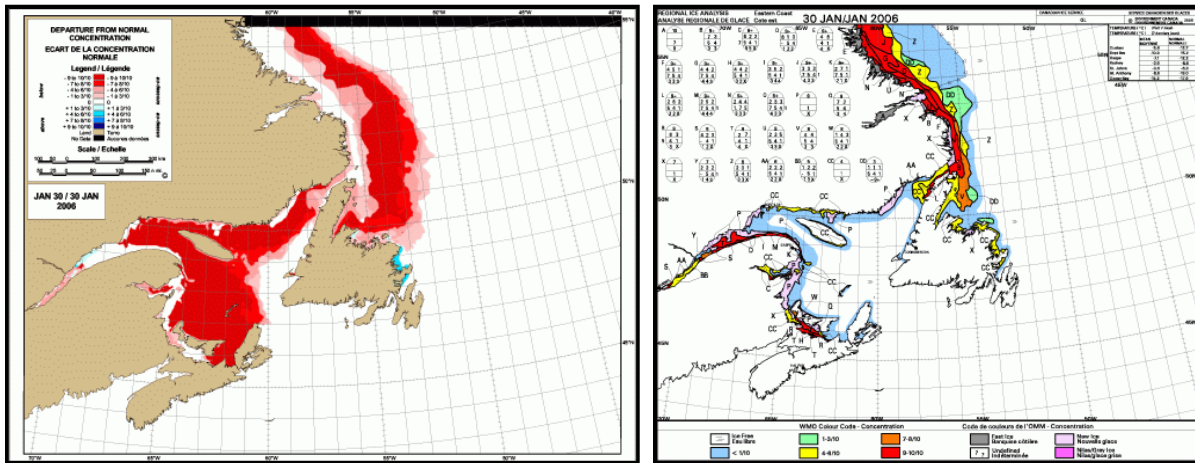


Figure 8: Departure from normal ice concentration and observed ice situation – January 30th, 2006.

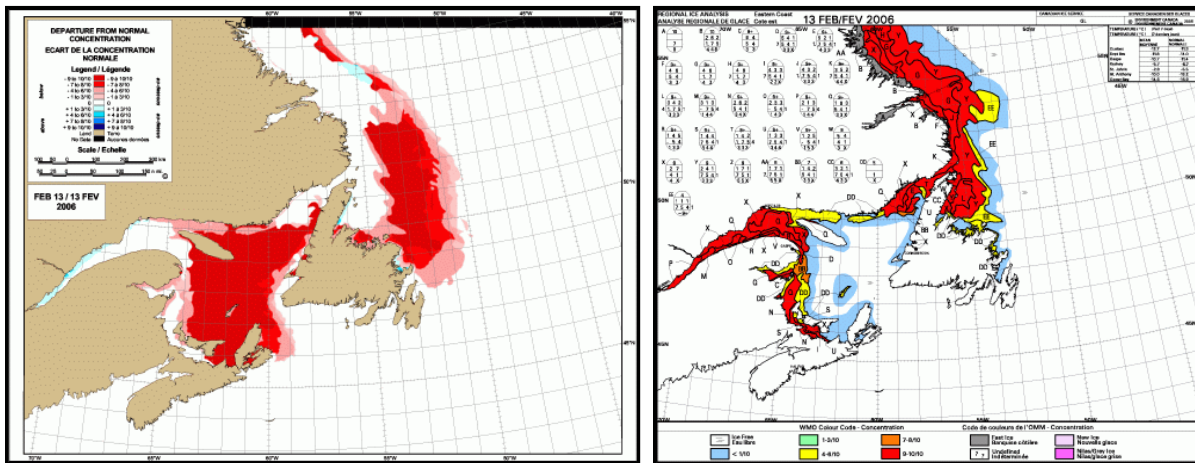


Figure 9: Departure from normal ice concentration and observed ice situation – February 13th, 2006.

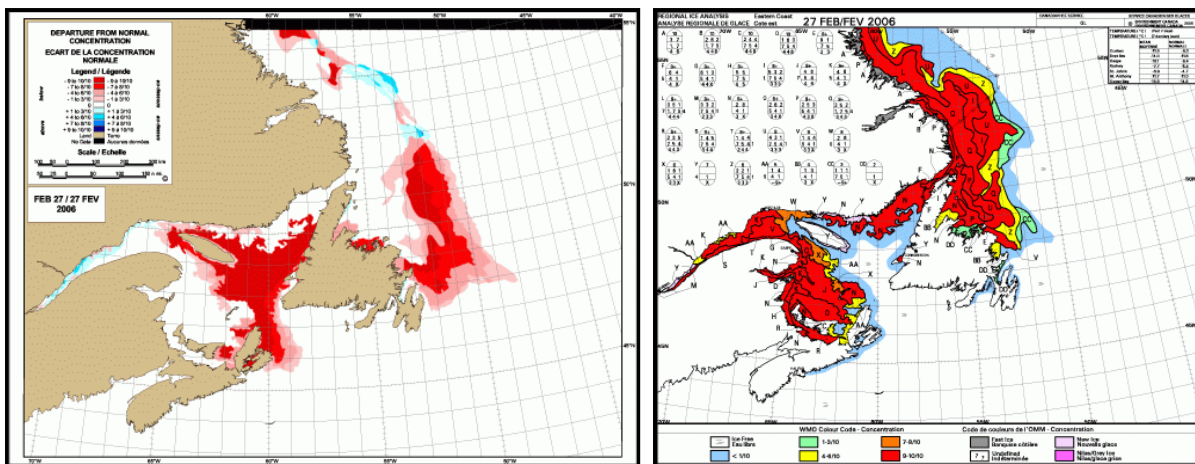


Figure 10: Departure from normal ice concentration and observed ice situation – February 27th, 2006.

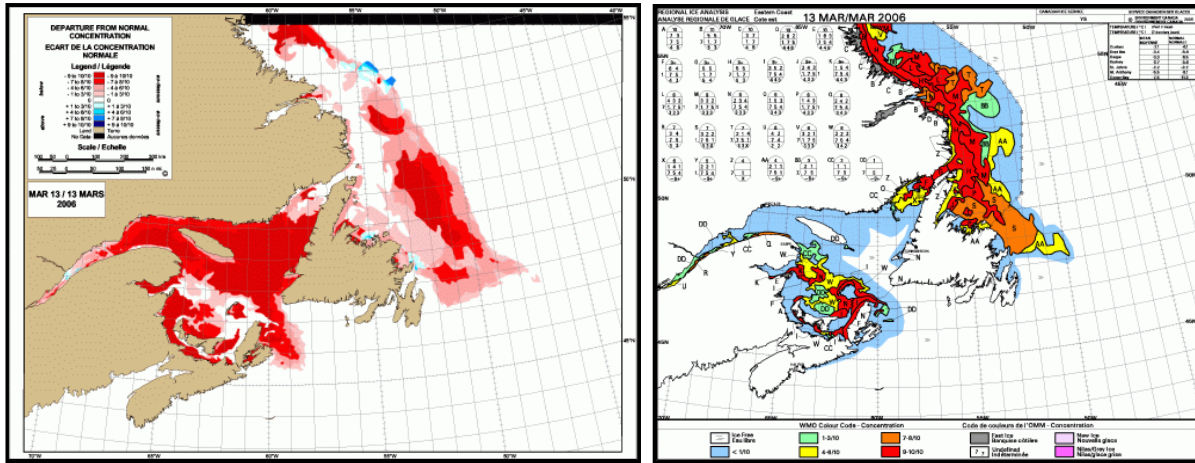


Figure 11: Departure from normal ice concentration and observed ice situation – March 13th, 2006.

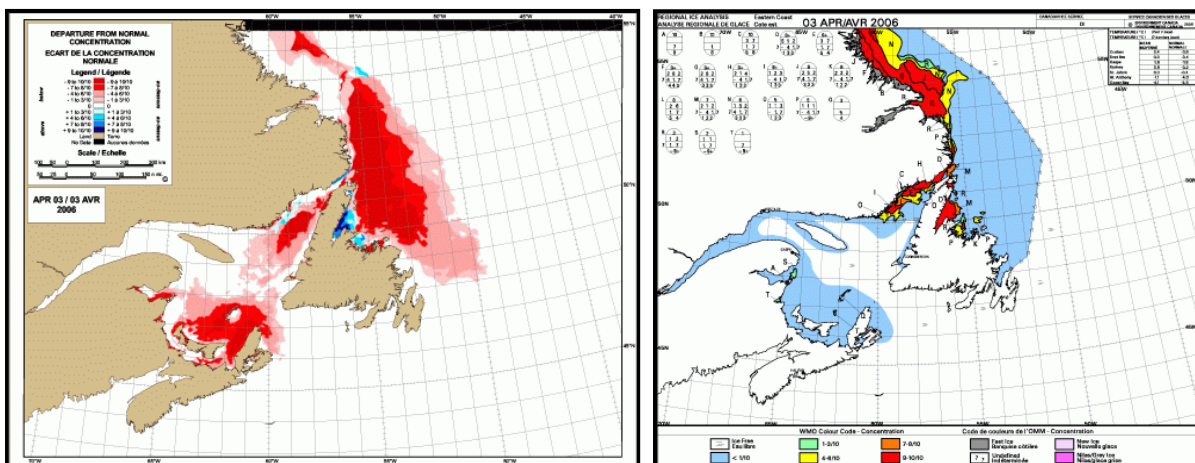


Figure 12: Departure from normal ice concentration and observed ice situation – April 3rd, 2006.

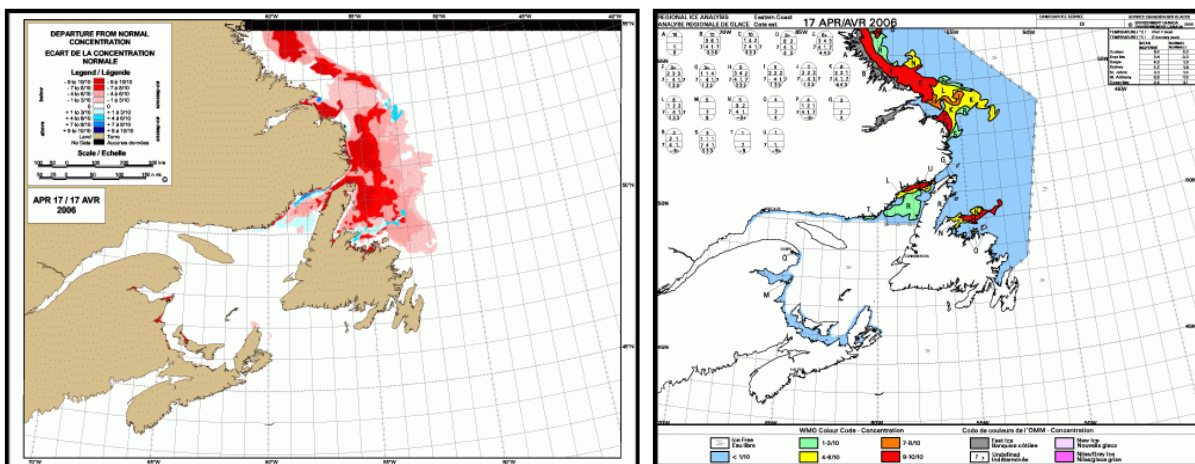


Figure 13: Departure from normal ice concentration and observed ice situation – April 17th, 2006.

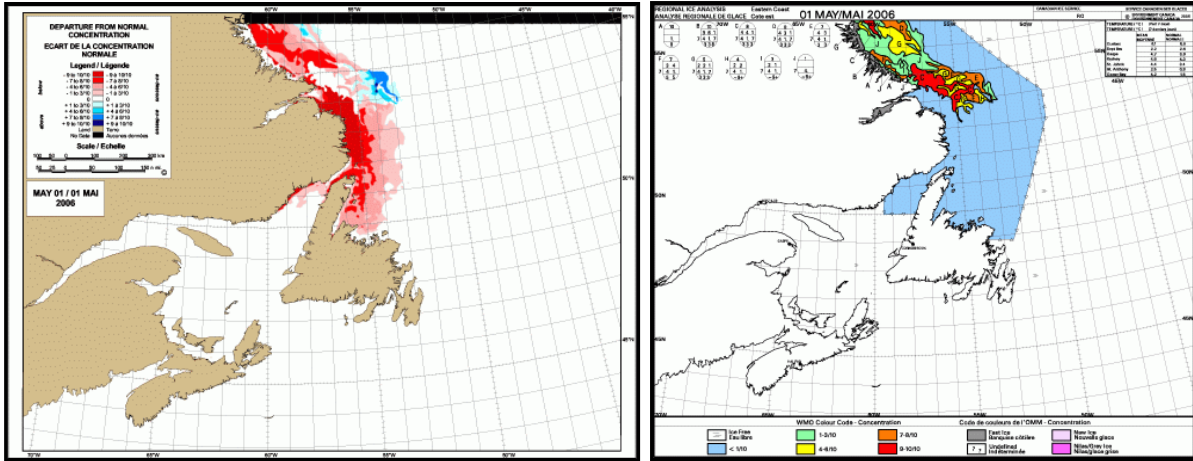


Figure 14: Departure from normal ice concentration and observed ice situation – May 1st, 2006.

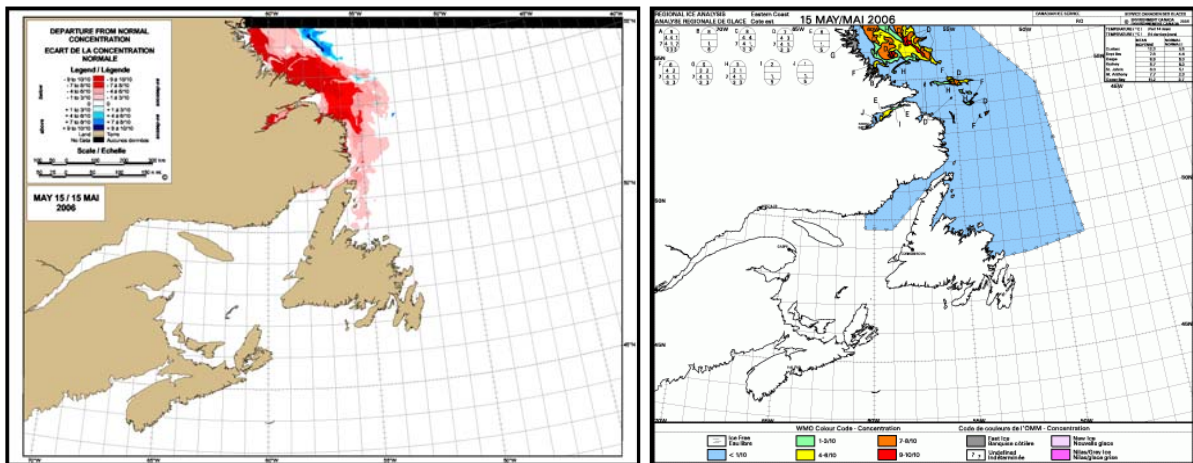


Figure 15: Departure from normal ice concentration and observed ice situation – May 15th, 2006.