



**SOUTHERN GULF OF ST. LAWRENCE (sGSL) SNOW CRAB ADVISORY
COMMITTEE MEETING -AREA 12, 12E, 12F AND 19
February 22, 2023 – 9:00-4:30
Draft Minutes**

Annex a – List of Participants

1. Welcoming Remarks– Mireille Chiasson, President

Mireille Chiasson, Director, Resource Management and Fisheries, Fisheries and Oceans Canada (DFO) and Chair of the Committee, welcomed participants and acknowledged the land on which we stand. She introduced the operating rules for the day, explained the purpose of the meeting and reviewed the agenda.

2. Economic Perspective– Manon Mallet

- There was presentation of the economic outlook, which was shared with the participants.
- C. A more difficult year is forecasted for fish harvesters in terms of the price paid at the wharf. Projections seem to indicate that the price will be lower than in 2022.
- Q. Can you compare inventory between years?
A. DFO doesn't compile inventory data; the processing companies have that information.
A. (Processor): There's no one who has a precise amount regarding inventory, but, of course, we talk to all the processors and there are two main considerations such as what we have left at our processing facilities and also what has been sold to our brokers in the U.S. that hasn't yet been sold to retail or to restaurants. Unfortunately, there's a lot of inventory right now, and there will be more at the start of the season. I predict a very difficult year in that aspect in 2023.
- We were expecting this in 2022 because the price (paid to the factories for the processed product) we received in 2022 was 50% less than what we received in 2021, and we were expecting a lower price, but the retailers and restaurants wanted to sell the product they had bought at a very high price to not incur a loss. So they kept the 2021 price, and I think that's what's going to happen in 2023: they're going to want to sell the 2022 price, which is still much lower than the 2021 price. With the 2022 price we've received, they should start to sell the product.
- Q. Why isn't snow crab selling well on the European market?
A. There's visibly no market. Europeans don't really eat crab. It is also a problem in Canada, we don't have a market. When we look at the export graph, we only sell to four places in the world, and it would be very concerning to lose even just one of them, especially the American market, because we export 80% of our product to them.

3. Sciences and Resource management

Summary of the sGSL snow crab stock assessment for the 2023 fishery	Fabiola Akaishi
Corresponding TAC	Josiane Massiera
<ul style="list-style-type: none"> • A presentation was made to summarize the sGSL snow crab stock assessment for 2022 and provide the advice for the 2023 fishery. For more information, please consult the following publication: Science Advisory Report 2023/017 (dfo-mpo.gc.ca). The snow crab stock is currently in the healthy zone as per the sGSL snow crab Precautionary Approach (PA). • The proposed TAC by fishing area for 2023 is presented. 	



Q. Where does the temperature data for the fishing areas come from?

A. DFO's oceanographic group conducted the at-sea sampling.

Q. Where does the 2022 TAC on your chart come from? It seems different.

A. It comes from the TAC figures following the recommended exploitation rate of the PA corresponding to the 2022 commercial biomass estimate. The TAC announced in 2022 was different because the exploitation rate chosen for Area 12F was lower.

Q. What is the reason for the lower TAC in Area 19 if the snow crab stock is healthy?

A. We're not sure. There were 25 stations in Area 19 and 22 of them showed a decline. There is a higher temperature influx, but there are many factors such as natural mortality and seasonal migration that could be looked at. This area is smaller and very dynamic. A similar decline had also been observed in area 19 in 2011 and 2012, this could be cyclical and remains to be explored.

Q. Do you know anything about the size of snow crabs?

A. We've tried to get some studies on that, but right now we don't have any results that are published. In our opinion, there are no significant trends in crab size one way or the other; sizes go up and down.

Action: Share Fabiola's presentation.

Follow-up: The presentation was shared with the Committee on February 23 and the Science Advise was shared by email on April 23, 2023: [Science Advisory Report 2023/017 \(dfo-mpo.gc.ca\)](https://www.dfo-mpo.gc.ca/science/advisory-reports-rapports-conseils/2023/017/2023-017-eng.html)

4. Canadian Coast Guard (CCG) - Brad Durnford

- There was an update on ice conditions from the CCG.
- We have several tools and equipment available this year, such as the Amphibex and Ocean Tug and a multitude of other icebreakers.
- There may also be a possibility of using a shallow-water icebreaker that can go to Caraquet and possibly Shippagan at high tide. This depends on the priority of river operations.

Q. You mentioned that the contract for "Amphibex" has been signed and the equipment is ready to go into the ports of Shippagan, Caraquet and Lamèque. Can you tell me more specifically who gives you the green light to start the de-icing operations?

A. The machinery and the operator are ready. We're waiting for more signs of spring before starting. We don't want to break the ice and have it freeze over again. We're definitely ahead of where we were last year, so if you see any signs at home that it might be time to start, you can contact me.

Q. When will the hovercraft be available?

A. It's still the same scenario as in previous years, towards the end of March and early April depending on flooding priorities elsewhere.

Q. There was talk of a search and rescue helicopter stationed in PEI. Is there any follow-up?

R. I can't speak for the army, but the helicopter can sometimes be pre-deployed. Right now, the army is having trouble finding personnel. So if we open the fishery during the week, there's usually no problem for the 30-minute standby.

5. Conservation and Protection (C&P) - Jean-Claude Legresley

No questions or comments on the report presented by C&P on Fishing 2022.



6. Fisheries Management- Josiane Massiera

a) Conditions of licence

No questions on the changes to snow crab licence conditions for the 2023 season.

b) Soft shell protocol / At-sea observers

Presentation of at-sea observer coverage percentages by area since 2012.

- The low at-sea observer coverage began in 2020, the year of the covid. Captains have refused to have at-sea observers or extra people on their boats.
- It's a big challenge to find labor.
- There would be merit in reviewing the program without necessarily eliminating it.

C. It's important to have this program. Maybe it could be replaced by cameras? However, we wouldn't be able to see if it's a soft shell crab.

C. Perhaps they could have a report of soft shell crabs by fish harvesters instead of observer reports.

C. This program is an U.S. Marine Mammal Protection Act (MMPA) requirement, so this should be taken into consideration.

C. There are also processor considerations to take into account, as plants must reduce the % of soft shell crab, but fish harvesters don't always agree with the reduced amounts.

Q. With 6-7% observer coverage at sea, have you seen any differences at the plant level?

A. I wouldn't say we saw any differences. There were a few problematic boats that we addressed, but if we eliminated the program altogether, it could become an issue.

C. The pay structure of observers in Area 19 may be one reason why there is a labor shortage since fishing trips are much shorter, so the observer does not receive a full day pay. Observers often come from outside the region and are therefore unwilling to travel for a reduced pay.

c) Quota Reconciliation

- Before turning to the subject of reconciliation, DFO asked if it would be possible to encourage fishers to reissue their licences outside the fishing season to facilitate quota monitoring.
- A presentation on the Administrative Guidelines on Reconciliation was given, along with some statistics on overruns.

Q. Would it be possible to carry over unfished quota to the following year?

A. The issue with snow crab is that TACs and stock assessments are made each year on the basis of residual biomass. So if we add to this assessment a carryover of quotas that hasn't been caught, it's like counting the crab twice, and it could have an impact on stock assessment and conservation.

C. With the numerous closures of the grids early in the fishing season due to whales, this encourages fish harvesters to overrun to ensure they catch all their quotas.

Q. Discussions on how dockside monitoring companies (DMCs) could play a role in transferring an overrun to another fish harvesters. Also, there will be no more fish harvesters releasing their crab because they could arrive at the dock and transfer the crab to another fish harvesters (if he is behind).

A. The fish harvesters can already make a transfer (up to 50% of his initial quota) at any time up to December.



C. It's problematic that the fish harvesters isn't penalized/charged when he exceeds his quota by a lot. Couldn't we put a limit?
 C. Perhaps one way of limiting overruns would be to remove double the amount overrun the following year. For example, if there is 1 tonne overrun, 2 tonnes are removed the following year.

d) Administrative List (format change)

- This item was discussed at the pre-Advisory Committee meeting in November. Individual shares in the administrative list will now be displayed in the same format for each licence holder, as these shares will now be calculated against the overall Area 12 TAC (18, 25, 26) instead of the fleet TAC. All commercial communal licences will also be included in Group C- First Nations with a footnote to indicate the four licences that have been acquired from the traditional "Midshore" fleet.

Q. The midshore licences that are listed in the First Nations administrative list, will they be governed by the First Nations trap distribution rules or by the rules governing trap distribution from the midshore fleet?

A. There is no longer a trap distribution formula. Each year, the same number of traps for each licence remains the same, regardless of the TAC. These four licences have the same number of traps as the midshore. As for permanent quota transfers, First Nations still have the option of transferring ("permanent") quota from or to other licence holders.

Q. Can you write this in a document?

A. Yes, we could add in your (traditional midshore fleet) Individual Transferable Quota (ITQ) guidelines that quota transfers can be done with snow crab communal commercial licences holders.

Q. If associations and First Nations can designate a maximum number of traps as they wish on several boats during the season, why would a Midshore fisher who has finished fishing for the season couldn't be authorized to distribute its traps to other Midshore fish harvesters to help them fish faster? Maybe we could request to DFO the creation of a trap allocation program for the Midshore fleet.

Q. When the 4 midshore fleet licences were acquired for the First Nations, DFO said that these licences would follow our same regulations. But now you're not saying the same thing.

A. These licences are commercial communal licences and therefore follow the [Aboriginal Communal Fishing Licences Regulations \(justice.gc.ca\)](http://justice.gc.ca); these licences are for the community, not for an individual. Directives evolve and change over time. At the current time, these licenses are commercial community licenses.

C. Maybe it would be a good idea to have a session/workshop on aboriginal fishing rights and let us know how it has changed and how it continues to change.

ACTION: Add to the ITQ guidelines for Midshore fishers that they can transfer ("permanent") quota with First Nations.

e) Individual Transferable Quota (ITQ) Guidelines (ITQ)

- A summary of changes to the QIT administrative guidelines was presented. There was no question.

Action /Follow-up : QIT administrative guidelines have been or will be shared with the participants in question.



f) Update on pilot project (additional 25 traps per licence holder for traditional “Midshore” fleet)

- No decision was taken on the proposal to have a pilot project in 2023 providing 25 additional traps per Midshore fleet licence holder at the start of the season.
- A presentation of the ACA was made before closing the meeting.

Q. Do you have an update on when we'll hear back?

A. No

Follow-up: : DFO has not approved the pilot project.

g) ToR / opening season protocol

- DFO thanks the Committee members who provided comments on the season-opening protocol. The revised protocol has not yet been approved, but will be shared with this committee.

Follow-up : The ToR / Protocol for setting season opening dates was shared with the Committee on March 7, 2023. Details of safety-at-sea considerations were added.

7. Management Measures to protect North Atlantic Right Whales (NARW) – 2023

a) U.S. Marine Mammal Protection Act (MMPA)

Brett Gilchrist

- A presentation was shared prior to this meeting and the message that was announced on October 20, 2022, was repeated: "the United States has announced an additional one-year extension of the exemption period before the MMPA import provisions come into effect. The import provisions will come into force on January 1, 2024.

b) Fisheries closures protocols for 2023

Brett Gilchrist

- The announcement on management measures to protect the BNAN will not be issued until March. We don't expect many changes, as we're in the final year of the MMPA import provisions.

c) Ghost Gear Fund 2023-2024

- A presentation was shared with participants.

d) Whalesafe gear in Canadian fisheries

- Some presentations were shared with participants.
- There will be a workshop on this topic in the fall.

Q. Can you tell us about the Appropriation Bill that just passed in Maine, in the U.S.A.?

A. Currently in Maine, the Bill has been extended to 2029. They have similar policies to what they have now to protect whales and the lobster fishery (weak link gear and grid closures). No new protection measures can be added until 2029.

e) Industry Presentation

Philippe Cormier (CORBO) et
Kortney Opshaug (Blue Ocean Gear)



Activity 1 (2018-2022): Whale-safe snow crab fishing using ropes on demand with trawls of trap
"Conclusion: Since 2018, we've witnessed a fascinating increase of interest and curiosity from this fishery's stakeholders for EdgeTech's and others' technology. We believe Rope on demand may be a good alternative to allow the coexistence of the Snow Crab Fishery and the NARWs in the closed areas of the Southern Gulf of St. Lawrence, but a lot of work is still needed to make it viable and safe for everyone. It's one thing make the technology work, it's another to make it work in a real life fishery setting".

Q. Did you use additional traps to test the gear on request?

A. Yes

Q. Do your systems detect other systems?

A. Not yet. That's currently an issue, but we're working on it.

Activity 2 - Whale-safe snow crab fishing using regular and/or weak ropes with load cells for hauling traps.
Conclusion: "Following the results obtained and presented here, we strongly recommend that none of the options tested in these experiments be imposed as mandatory measures in areas open to snow crab fishing. To prevent creating more ghost gear, but furthermore for crew safety, we believe that we will need much more development and testing, and a drastic change in hauling gear to safely using weak ropes or links within the snow crab fishing industry."

Activity 3 – Tracking vessels and whales activities using emerging acoustic technologies and methods.

Activity 4 - Smart Buoys Monitoring of Traps

- Detection of entangled whales
- Less mortality thanks to faster rescue response
- Compatible with on-demand gear systems
- Time/location of return to surface

Next steps :

- Deployments with both standard lines and on-demand gear systems
- Additional fish harvesters involved to expand area and gain feedback
- Simulation of whale entanglement and movement of lost gear to improve detection

8. Other Items

a) Species at risk	Jenna Morissette
<ul style="list-style-type: none"> • Presentation on species at risk. 	
b) E-logs	Josiane Massiera / Marc Dupuis
<ul style="list-style-type: none"> • The National Electronic Logbook (ELOG) initiative is still underway, and DFO plans to phase out paper logbooks by the year 2024. We encourage everyone to start using ELOG if you haven't already. You can visit the DFO ELOG website for more information: Electronic logbooks (ELOGS) (dfo-mpo.gc.ca) <p>C. There seems to be more electronic data to enter than for the paper logbook. The more data at sea that fisher harvester have to enter, the greater the risk to safety.</p> <p>C. Fishers must be trained in the use of ELOGS.</p> <p>C. The data in the ELOGS must be completed (close) immediately, but the ELOGS can be submitted when the fisher has access to an internet connection (within 72 hours).</p>	



c) Policy engagements	Josiane Massiéra
<ul style="list-style-type: none"> A policy rationalization exercise began last year for the Gulf Region licensing policy. Engagement sessions were held in February 2022 and consultation sessions in December 2022. A document entitled "What We Heard" is being drafted and will be distributed. The target for implementation of any resulting changes is winter 2023/24, so only before the 2024 season. Special substitute operator COVID-19: There will be no special substitute operator Covid19 in 2023. This flexibility expired on June 30, 2022. Future commitment on vessel length and substitute operator: Headquarters staff will be in the Gulf region in March 2023 to engage industry on vessel and related policies (this will include substitute operator). 	
d) Fall Workshops	Josiane Massiéra
<ul style="list-style-type: none"> It is possible that one or more snow crab workshops of interest will be held in the Fall. 	
Follow-up: A whalesafe fishing gear trial results symposium is taking place in Moncton September 14-15, 2023.	
e) Industry Presentation – 25 extra traps	ACA (Robert Haché / Marcel Hébert)
<ul style="list-style-type: none"> The majority of people agree with the addition of 25 extra traps, but some participants would like it to be for everyone. Concerns about the extra traps in terms of capacity at the plants. However, in 2017, there was a higher quota. 	

9. Closing remarks and end of meeting – Mireille Chiasson (chair)

<ul style="list-style-type: none"> We will be following up on action items, and may organize workshops for further discussion on certain points, as it's not always possible to discuss them in depth during the advisory committee.

Annex A - List of Participants

Name of Participant / Nom du Participant	Name of the Organization / Nom de l'organisation	Present or Online / Présent ou en ligne
Mireille Chiasson	MPO-Gestion de la ressource, Golfe	Present/Présent
Josiane Massiéra	MPO - Gestion de la ressource, Golfe	Present/Présent
Pierre Bélanger	MPO-Gestion de la ressource, Golfe	Present/Présent
Antoine Rivierre	MPO- Gestion de la ressource, Québec	Present/Présent
Ben Gallant	MPO - Gestion de la ressource, Golfe	Present/Présent
Jean-Claude Legresley	MPO- Conservation et Protection, Golfe	Present/Présent
Fabiola Akaishi	MPO- Sciences, Golfe	Present/Présent
Phil Walker	Garde côtière Canadienne (GCC), recherche et sauvetage	Present/Présent
Brad Durnford	GCC-Spécialiste de glace	Online/En Ligne
Gilles Thériault	Association des transformateurs de crabe du N.-B.	Online/En Ligne
Annie Paulin	Province du Nouveau-Brunswick	Present/Présent



Robert MacMillan	Province de l'Î.-P.É	Online/En Ligne
Jason Knockwood	Abegweit	Online/En Ligne
Denny Toplin	Lennox Island	Present/Présent
Christina Burnsed	Micmacs of Gesgapegiag	Present/Présent
James Metallic-Sloan	Listuguj Mi'gmaq Government	Present/Présent
Rachel Nowlan	Indian Island	Present/Présent
Jason Barmby	Esgenoopetitj First Nation	Present/Présent
Dawn Levi	Elsipogtog First Nation	Online/En Ligne
Devin Ward	Anquotum/Eel Ground FN	Online/En Ligne
Bobby Gould	We'koqma'q (12F)	Present/Présent
Emmanuel Sandt-Duguay	Association de gestion halieutique autochtone Mi'gmaq et Wolastoqey (AGHAMW)	Present/Présent
Ethan Augustine	NSMDC- Anqotum Resource Management	Online/En Ligne
Craig Knickle	Mi'kmaq Confederacy of PEI	Present/Présent
Paul Tyson	Unama'ki Institute of Natural Resources (UINR)	Online/En Ligne
Robert Haché	Association des crabiers acadiens (ACA)	Present/Présent
Marcel Hébert	ACA	Present/Présent
Martin Noël	Association des pêcheurs professionnels crabiers acadiens (APPCA)	Present/Présent
Paul Robichaud	APPCA	Present/Présent
Daniel Desbois	Association des crabiers Gaspésiens (ACG)	Present/Présent
Paul Boudreau	Regroupement des pêcheurs professionnels des Îles-de-la-Madeleine (RPPIM)	Present/Présent
Jean-Marc Arseneau	RPPIM	Present/Présent
Billy Brophy	Area 18 Crab Association	Present/Présent
Doug Cameron	Prince Edward Island Snow Crab Fishermen Inc (PEISCFI)	Present/Présent
Alden Gaudet	PEISCFI	Present/Présent
Kenneth Leclair	PEI Fishermen's Association (PEIFA)	Present/Présent
Molly Aylward	PEIFA	Present/Présent
Martin Mallet	Maritime Fishermen's Union (MFU)-Union des pêcheurs des Maritimes (UPM)	Present/Présent
Mathieu Hébert	MFU-UPM	Present/Présent
Samantha Bois	Association des capitaines-propriétaires de la Gaspésie (ACPG)	Present/Présent
Jordan MacDougall	Inverness South Fishermen's Association	Present/Présent
Andrew Bourgeois	Gulf Nova Scotia Fishermen's Association (GNSFC)	Present/Présent
Lain MacDonald	Gulf Bonafide Fishermen's Organization	Present/Présent
James Brow	North of Smokey Fisherman's Association	Online/En Ligne
Robin Jomphe	Regroupement des Palangriers & Pétoncliers Uniques Madelinots (RPPUM)	Online/En Ligne
Steve Lapierre	Zone 12F	Present/Présent



Merrielle Ouellet	Zone 12F	Present/Présent
Philippe Giard	Zone 12E	Online/En Ligne
Kristin Lewis	Lennox Island	Present/Présent
Cameron Francis	Elsipogtog First Nation	Online/En Ligne
Sean Triska	Mawiw Tribal Council	Present/Présent
Joel Gionet	ACA	Present/Présent
Kevin Mallet	ACA	Present/Présent
Marcel Vienneau	ACA	Present/Présent
Sylvain Poulin	ACA	Present/Présent
Serge Blanchard	APPCA	Present/Présent
Stephane Ferron	APPCA	Present/Présent
Eudore Aucoin	APPCA	Present/Présent
Jean Lanteigne	Fédération Régionale Acadienne des Pêcheurs Professionnels (FRAPP)	Present/Présent
Eda Roussel	FRAPP	Present/Présent
Eddy Mazerolle	FRAPP	Present/Présent
Philippe Omerlu	FRAPP	Present/Présent
Gilles Noël	FRAPP	Present/Présent
Yvon Thériault	RPPIM	Present/Présent
Gilles Duguay	RPPIM	Present/Présent
Maude Duguay	Opilio (MFU-UPM)	Present/Présent
Pierre Dupuis	UPM/MFU	Present/Présent
Suzanne Morais - Vienneau	Ichiboshi (Transformateur N.-B.)	Present/Présent
Hanna Vatcher	Fédération Canadienne de la Faune (FCF-CWF)	Present/Présent
Alexandra Cole	FCF-CWF	Present/Présent
Elizabeth Vézina	FCF-CWF	Online/En Ligne
J Shiva	FCF-CWF	Online/En Ligne
Kortney Opshaug	Blue Ocean Gear	Present/Présent
Philippe Cormier	CORBO	Present/Présent
Robert Nicolas	École des pêches et de l'aquaculture du Québec (EPAQ) (journaliste)	Present/Présent
Clément Beaudoin	MPO- Conservation et Protection, Golfe	Present/Présent
Steve Hachey	MPO-Communications, Golfe	Present/Présent
Alain Mallet	MPO- Conservation marine, Golfe	Present/Présent
Marc Dupuis	MPO-Coordonnateur Elog, Golfe	Present/Présent
Émilie Comfort	MPO-Conservation et Protection, Golfe	Present/Présent
Mikio Moriyasu	MPO-Sciences, Golfe	Present/Présent
Mario Gaudet	MPO-Pêches autochtones, Golfe	Present/Présent
Michelyne Poulin	MPO- Fonds des pêches de l'Atlantique	Present/Présent
France Saulnier	MPO-Gestion de la ressource, Golfe	Present/Présent



Luc Légère	MPO-Bureau de secteur de l'est N.-B. (ENB), Golfe	Present/Présent
Sébastien Beauchamp	MPO-Conservation et Protection, Québec	Present/Présent
Gabriel Albert	MPO-Conservation et Protection, Golfe	Present/Présent
Ben Moore	MPO-Bureau de secteur, Î.-P.-É, Golfe	Present/Présent
Alan Dwyer	MPO-Bureau de secteur, Golfe N.-É.	Present/Présent
Rémi Brine	MPO-Centre d'expertises sur les mammifères marins (CEMM) de l'Atlantique	Present/Présent
Simon Belliveau	MPO-CEMM de l'Atlantique	Present/Présent
Annie Ferguson	Province du Nouveau-Brunswick	Online/En Ligne
Nat Richard	Association des transformateurs	Online/En Ligne
Geatan Finn	Association coopérative des pêcheurs de l'Île (ACPI)	Online/En Ligne
Gilles Hubert	Association des transformateurs de crabe du N.-B.	Online/En Ligne
Lyne Robichaud	MFU-UPM	Online/En Ligne
Marcel Godin	ACPI	Online/En Ligne
Alexandra Mayette	FCF-CWF	Online/En Ligne
Carter Hutt	PEISCFI	Online/En Ligne
Georges Moore	MPO-Bureau de secteur ENB, Golfe	Online/En Ligne
Rachel Friolet	MPO-Bureau de secteur ENB, Golfe	Online/En Ligne
Marc Godin	MPO-Bureau de secteur de ENB, Golfe	Online/En Ligne
Ron Pumphrey	MPO-Bureau de secteur, Golfe N.-É.	Online/En Ligne
Lisa Bujold	MPO-Gestion de la ressource, Golfe	Online/En Ligne
Lori Cuddy	MPO-Bureau de secteur de l'Î.-P.-É	Online/En Ligne
Cédric Arseneau	MPO-Bureau de secteur, IDM	Online/En Ligne
Chantal Roussel	MPO-Communications, Golfe	Online/En Ligne
Andrea Morden	MPO-Gestion des pêches, Bureau centrale	Online/En Ligne
Jenna Morissette	MPO-Espèce en péril, Golfe	Present/Présent
Carole LeBlanc	MPO-Affaires autochtones, Golfe	Online/En Ligne
Julie Aucoin	MPO-Bureau de secteur de l'IDM, Québec	Online/En Ligne
Tania Pellecier	Javitech	Online/En Ligne
G Connor	Biorex	Online/En Ligne
Jaime		Online/En Ligne
Nancy R		Online/En Ligne
Véronique Loubier		Online/En Ligne
Patricia Cline		Online/En Ligne
Dounia Daoud		Online/En Ligne
Janie		Online/En Ligne
Katherine Morissette		Online/En Ligne