

Learning and evaluation situation

# Saguenay-St. Lawrence Marine Park: a protected territory

(Student Workbook)



Source: Parks Canada



Source: Parks Canada / M. Loisele

Name: \_\_\_\_\_

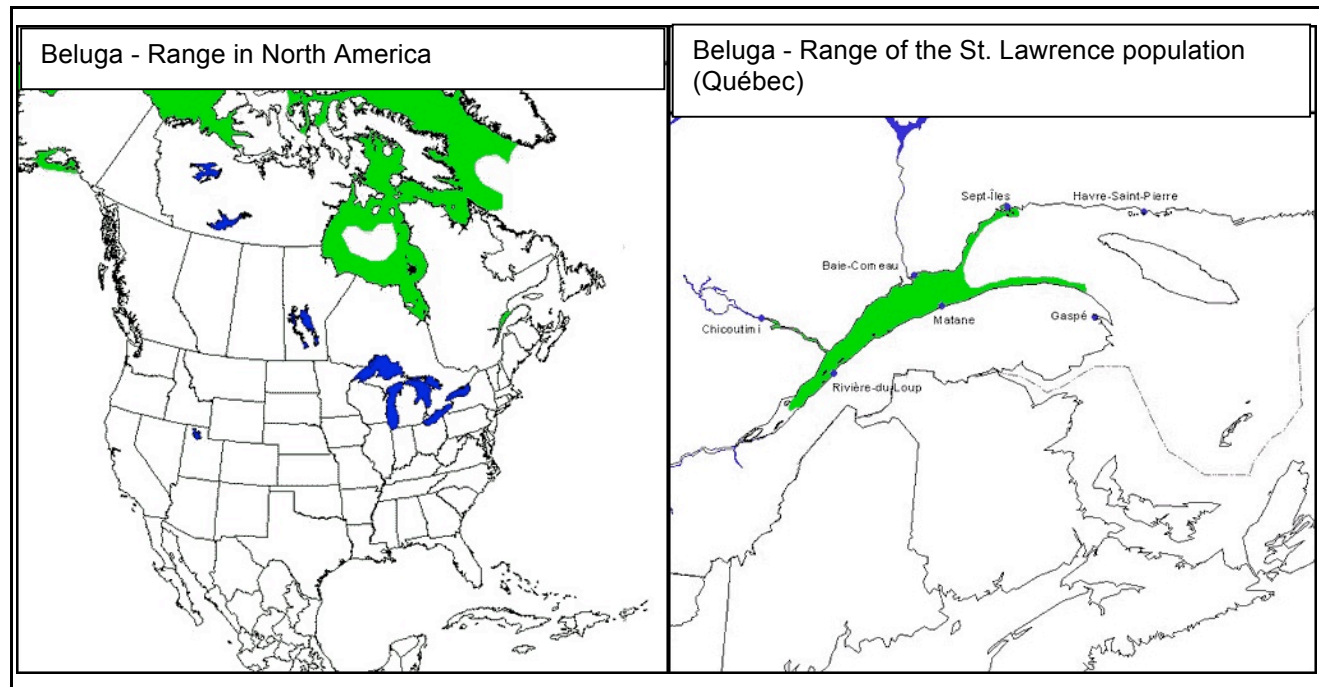
## Introduction:

### The beluga population of the St-Lawrence: resource, nuisance or rich heritage?

Look over the diagrams and time line (page 4) and discuss the following topics with your teacher and classmates:

- Beluga territory (where?)
- Decrease in the number of individuals (how many?)
- The history of beluga hunting (when and who?)
- Diseases affecting belugas (what and who?)

### Beluga whale distribution in North America



Source: Ministère des Ressources naturelles et de la Faune du Québec

## Diseases belugas still suffer from today



Source: GREMM / R. Michaud

- Each year, on average, 15 belugas are found beached along the shores of the St. Lawrence.
- Cancer causes 18% of adult beluga deaths in the St. Lawrence. Bacteria, viruses and parasites cause 32% of adult beluga deaths.

Source: Measures, 2008

## History of the beluga population in the St. Lawrence from 1870 to 2010

1870	1895	1920	1945	1970	1995	2020	2045
Actions des gouvernements							
		Government offers \$15 for each beluga killed		Beluga hunting banned			
				Saint Lawrence Action Plan: reduction of industrial pollutants			
				Belugas placed Threatened Species list			
					Creation of the Saguenay-St. Lawrence Marine Park		
Évolution de la population de bélugas							
Population between 7800 and 10 000 individuals				Population estimated at 300 individuals			
					Population estimated at 1,000 individuals		
Facteurs qui nuisent aux bélugas							
Dumping of toxic products and wastewater in the Great Lakes and St. Lawrence River				Change to their habitat and noise caused by the construction of docks, dredging and navigation			
Belugas hunted for their oil: approximately 13,000 individuals captured				18% of adult beluga deaths attributed to cancer			
		Belugas believed to harm commercial fishing; they are called the "white demon"					
		3,400 belugas killed for the \$15 bounty					

Source: Parks Canada and [www.lignedutemps.qc.ca](http://www.lignedutemps.qc.ca)


- Government action from 1990 to the present: St. Lawrence Action Plan, reduction of industrial pollutants
- Factors likely to adversely affect belugas
- Belugas hunted for oil and leather: 13 000 individuals captured
- Beluga prey studies (1938-1946)
- First tests carried out on beluga carcasses (1979)
- The beluga is placed on the endangered species list in Canada (1983)
- Creation of the Saguenay-St. Lawrence Marine Park (1998)
- Various studies conducted on the beluga and its habitat (1973-2010)
- Belugas are believed to harm commercial fishing; they are called the "white demons" (until approximately 1960)
- An estimated 3400 belugas were killed in exchange for a \$15 bounty per tail (1928-1950)
- 18% of adult beluga deaths are attributed to cancer
- Habitat changes and noise caused by the construction of wharves, dredging, and navigation (1970-2010...)



Discuss the following question with your classmates:

*Why should we be concerned about the fate of belugas?*



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## Sequence 1 – Competency 3 – Protected territories around the world

Constructs his/her consciousness of global citizenship

Evaluation criteria	A	B	C	D	E
<b>Expression of the global nature of a geographic phenomenon (tasks 2 and 3A)</b>  <b>AND (task 3B)</b>	Accurately locates <b>3 parks</b> and provides <b>4 relevant characteristics</b> for each park	Accurately locates <b>3 parks</b> and provides <b>at least 3 relevant characteristics</b>	Approximately locates at least <b>2 parks</b> and provides at least <b>2 relevant characteristics</b>	Approximately locates at least <b>1 park</b> and provides at least <b>1 relevant characteristic</b>	Does not locate the parks and does not provide any relevant characteristics
	Provides a <b>very satisfactory</b> description of what the protected territories have in common	Provides a <b>satisfactory</b> description of what the protected territories have in common	Provides a <b>somewhat satisfactory</b> description of what the protected territories have in common	Provides an <b>unsatisfactory</b> description of what the protected territories have in common	Does not describe what the protected territories have in common
<b>Consideration of the impact of human actions on the future of the planet (task 3 C, D)</b>	Provides a <b>very satisfactory</b> description of the impact <b>AND</b> origin of human actions	Provides a <b>satisfactory</b> description of the impact <b>AND</b> origin of human actions	Provides a <b>unsatisfactory</b> description of the impact <b>AND</b> origin of human actions	Provides an <b>unsatisfactory</b> description of the impact <b>AND/OR</b> origin of human actions	Does not describe the impact and origin of human actions
<b>Justification of his/her opinion (task 3 E and F)</b>	Takes a position on the relevance of creating protected areas and justifies it in a <b>very satisfactory manner</b>	Takes a position on the relevance of creating protected areas and justifies it in a <b>satisfactory manner</b>	Adopts a position on the relevance of creating protected areas and justifies it in a <b>somewhat satisfactory manner</b>	Adopts a position on the relevance of creating protected areas and justifies it in a <b>unsatisfactory manner</b>	Does not take a position

Expression of the global nature of a geographic phenomenon: \_\_\_\_\_

Consideration of the impact of human actions on the future of the planet: \_\_\_\_\_

Justification of his/her opinion: \_\_\_\_\_

## Sequence 1 – Competency 3

### Protected territories around the world

#### Task 1: Exploring protected territories

The **three** protected territories shown below have been recognized by UNESCO and are part of the World Heritage List. To complete this task, you must first **carefully read** the fact sheets in [APPENDIX 1](#), as they provide a description of UNESCO and of each of the protected territories.

Galapagos Islands



Source: [Galapagos tortoise] © [Flickr](#) / Ucumari - Under Creative Commons License BY-NC-SA

Ha Long Bay (Vietnam)



Source: [Halong Bay] © [Flickr](#) / Alessio.zz - Under Creative Commons License BY-NC -ND

Shark Bay (Australia)



Source: [Eagle Bluff] © [Flickr](#) / Charlene - Under Creative Commons License BY-ND

## Task 2: Drawing a map of the protected territories

You must now **create a map** with the **Cartograf** application available online at <http://cartograf.learnquebec.ca> . Your teacher will provide you with a detailed step-by-step guide you must follow to create your account and produce your map.

**A) First locate, as accurately as possible, the three sites** you have just studied by using **reference points**.

**B) Place three Point of Interest marker points**, one for each protected area.

Each point (or shape) contains a description window when you open it.

The descriptions you add to these points must include **at least four characteristics** for each protected territory. Choose the information that you feel is the most important or significant.

**Answer the following questions** to create useful **Descriptions** !

- What are the important **characteristics of this territory** (the natural environment's attractions: the sites, fauna and flora to be protected)?
- Why was this site included in UNESCO's **World Heritage list**?
- What are the threats to the **natural environment**?
- Is the site highly used (by visitors and local population)?
- Have local authorities adopted specific **protection measures**?

★ **Be careful** not to copy out what you have read in the fact sheets for each territory. Instead, summarize the most important information while using the questions above as a guide.



## Task 3: Identifying the global aspect, and taking a position

### Global aspect

A – Do you know of any other protected areas, in this country or elsewhere in the world? Name them:

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B – What do these territories and the three sites being studied **have in common**?

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### Human actions

C – What is the source of the threat faced by natural areas?

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D – As you understand it, **why** are these territories protected?

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Your opinion

E – Do you think that these territories should be protected? Is too much or not enough being done? **Justify your opinion** by providing **two examples** related to the territories being studied.

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F – Do you think that inscribing the sites on **UNESCO's World Heritage List** has had a major impact? If so, what is the impact? If not, explain why:

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# The Saguenay-St. Lawrence Marine Park

## A park without trees?

Have you ever taken a stroll through a park with no trees?

You can do so in the Tadoussac region, but you will need a boat, a kayak or a wet suit.

**In** a marine park, the focus is on protecting and valuing the **marine environment**. The water, flora, fauna and seabed are the defining elements of the park.

★ **In class, your teacher will explain the nature of a marine park and the natural and cultural elements that are protected and valued by the Saguenay-St. Lawrence Marine Park.**

**When you will have completed this task, all the mysteries of the Saguenay-St. Lawrence Marine Park will have been revealed!**



Source: Parks Canada / J.-L. Provencher

## Sequence 2 – Competency 1

### Drawing a sketch of the Saguenay-St. Lawrence Marine Park

Understands the organization of a territory

Evaluation criteria	A	B	C	D	E
<b>Identification of relevant elements of the organization of the territory</b>  <b>(task 1)</b>	Very clear and coherent sketch that <b>illustrates</b> more than <b>6 natural elements</b> in relevant locations	Very clear and coherent sketch that <b>illustrates 4 or 5 natural elements</b> in relevant locations	Clear and coherent sketch that <b>illustrates 3 natural elements</b> in approximate locations	Unclear and incoherent sketch that illustrates <b>fewer than 3 natural elements</b> in locations of little relevance	Incomplete and/or incomprehensible sketch
	Very clear and coherent sketch that <b>illustrates</b> more than <b>6 human elements</b> in relevant locations	Very clear and coherent sketch that <b>illustrates 4 or 5 human elements</b> in relevant locations	Clear and coherent sketch that <b>illustrates 3 human elements</b> in approximate locations	Unclear and incoherent sketch that illustrates <b>1 human element</b> in a location of little relevance	Incomplete and/or incomprehensible sketch
<b>Coherent representation of the organization of the territory</b>  <b>(task 2)</b>  The 6 <b>Point Descriptions</b> : threatened species (2), Transportation (4)	The <b>6 Point Descriptions</b> illustrate the characteristics of the organization of the territory in a satisfactory manner	At least <b>5 Point Descriptions</b> illustrate the characteristics of the organization of the territory in a satisfactory manner	At least <b>4 Point Descriptions</b> illustrate the characteristics of the organization of the territory in a satisfactory manner	At least <b>3 Point Descriptions</b> illustrate the characteristics of the organization of the territory in a satisfactory manner	Most of the <b>Point Descriptions</b> do not illustrate the characteristics of the organization of the territory in a satisfactory manner
<b>Coherent representation of the organization of the territory</b>  <b>(task 3)</b>	<b>Identifies</b> the motives behind human actions in a very satisfactory manner	<b>Identifies</b> the motives behind human actions in a satisfactory manner	<b>Identifies</b> the motives behind human actions in an acceptable manner	<b>Identifies</b> the motives behind human actions in an unsatisfactory manner	Does not identify any motives behind human actions
Identification of relevant elements of the organization of the territory: ____  Coherent representation of the organization of the territory: ____					



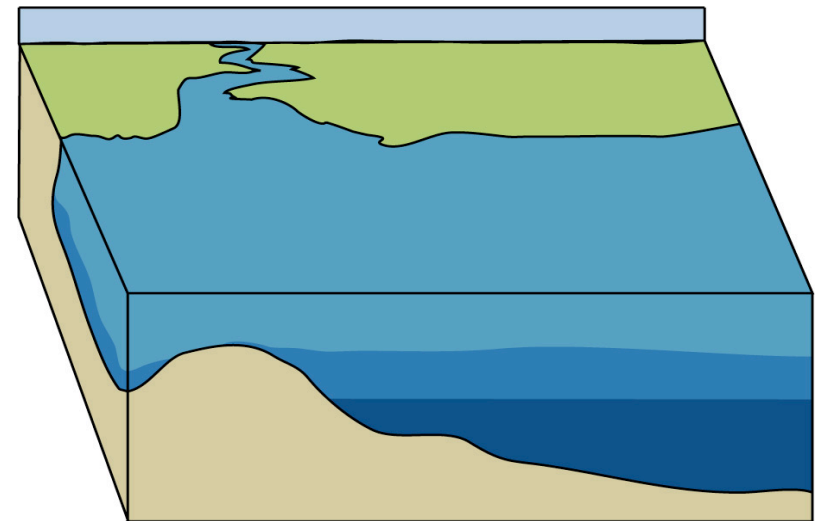
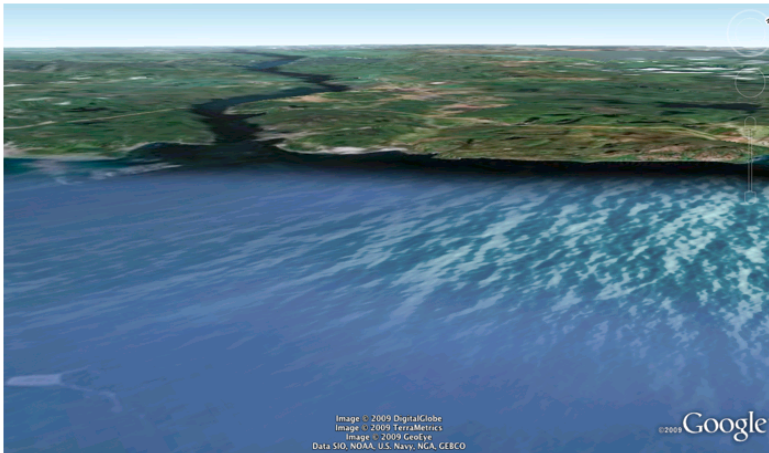
## What is a **geographical sketch**?

It is a **simple drawing** that represents the **key elements** of a landscape or territory.

It allows for a quick understanding of the **organization of a territory** and the main **issues** it raises.

For example, given the image of the landscape below...

**The Saguenay River flows into the St. Lawrence River**



... thus the following basic sketch can be drawn →

## What is included in a **geographical sketch**?

**Icons:** these are **drawings** to represent small-scale versions of known objects.

**Pictograms:** these are **symbolic representations** that have a particular *significance* (an action, a movement, etc.).

**A title and a legend:** this is the legend that includes the icons and pictograms you will use in your sketch.

**Point Descriptions:** these are **text boxes** appear when a chosen icon is clicked. They provide **information** and **images** that clarify the nature or function of the object represented by the icon.

## Task 1: Drawing a geographical sketch

Using the basic sketch provided by your teacher, you must now **draw a geographical sketch** using the icons and pictograms that you will draw. You will also write short texts in the form of **Point Descriptions** and link them to your sketch.

See also LEARN's How-to entitled How to Make a Geographic Sketch at

<http://www.learnquebec.ca/en/content/howtos/content.html?c=pagelist&s=&p=geoSketch>



Keep in mind that a good sketch speaks volumes, while remaining clear and simple.

All the necessary information is found in the documents provided in Appendix 3.

### 1- Read the introductory text: *An exceptional water column*

Look over the introductory text found at the beginning of Appendix 2. This text forms the basis of the knowledge you must acquire to clearly understand the territory and complete your geographical sketch of the marine park.

### 2- Study the map of the *Saguenay-St. Lawrence Marine Park territory* carefully

You will represent this territory in your sketch.

### 3- Draw your sketch!

## Task 1: Drawing a geographical sketch

Instructions for drawing your sketch						
Protected territory		Elements	Task	Observations	Reference	✓
	A	The <b>confluence area</b> or the <b>Laurentian Channel</b> ?	<b>Locate</b> the confluence area <b>or the Laurentian Channel</b> in your sketch.	You may add colour or texture to the interior of the confluence, but do so lightly, since you will have to place some icons in this area.	The text "The confluence." Appendix 2, page 11	
	B	The <b>fauna (the animals)</b>	Identify the location using the <b>icons</b> provided in the <b>legend</b> .	Read the fact sheet carefully for each animal to locate it as accurately as possible.	Documents in Appendix 2, pages 12 to 21	
	C	<b>Two</b> elements that pose a <b>threat</b> to the marine park's natural heritage	Represent and locate two threats by using the <b>icons</b> provided in the <b>legend</b> .	One of the threats must be from <b>outside</b> the park; the other is found <b>inside the park itself</b> .	Documents in Appendices 2 and 3 (fact sheets on the animals and fact sheets on sediment and water quality)	
Human presence in the park	D	Three <b>municipalities</b> : Tadoussac, Baie-Sainte-Catherine, Les Bergeronnes	<b>Name and locate</b> by using the "town" icon from the legend.	These towns border the park. Most of the whale-watching cruises depart from these locations.	Map "The Saguenay-St. Lawrence Marine Park territory" Appendix 2	
	E	<b>4 types of transportation</b> used in the park	<b>Illustrate and locate</b> by reproducing the icons in the legend.	Each type of transportation is located logically according to its function.	<b>Documents in Appendix 3</b> , pages 21 to 24	

## Task 2: writing and adding your Point Descriptions

<p><b>The 6 “Info Window” descriptions to write out:</b></p> <p>Text boxes that display the <b>information</b> that describes and clarifies the nature or the function of the object represented by the icon.</p> <p>Match each tooltip with the correct icon!</p>			<p>Add an image ✓</p>
F	<p><b>Two threatened marine species</b> (Appendix 2)</p>	<p>Choose two threatened marine species and <b>describe them</b>. Present the animal, explain how its survival is threatened and specify whether these <b>threats</b> are <b>local</b> (inside the park) or <b>external</b> to (from outside) the park.</p>	
G	<p><b>Sightseeing cruises and tourism</b> (Appendices 2 and 3)</p>	<p>Describe the sightseeing cruise activities and explain how <b>tourism</b> is an important <b>economic activity</b> in the marine park area.</p>	
H	<p><b>The three other types of boats in the park</b> (Appendix 3)</p>	<p>Briefly <b>describe</b> the three other types of boats in the park and provide a few <b>statistics</b>.</p>	
I	<p>Lastly, give your sketch a <b>title</b>.</p>		



## Task 3: Answer the summary question

Answer the following summary question to the best of your knowledge:

**Why has the Saguenay-St. Lawrence Marine Park become a protected territory?**

★ In your answer, you must discuss the **unique qualities** that this area possesses and the **reasons for** its richness.

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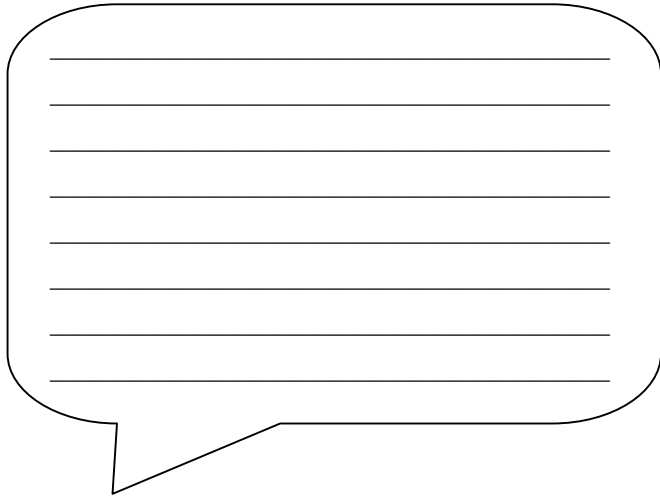
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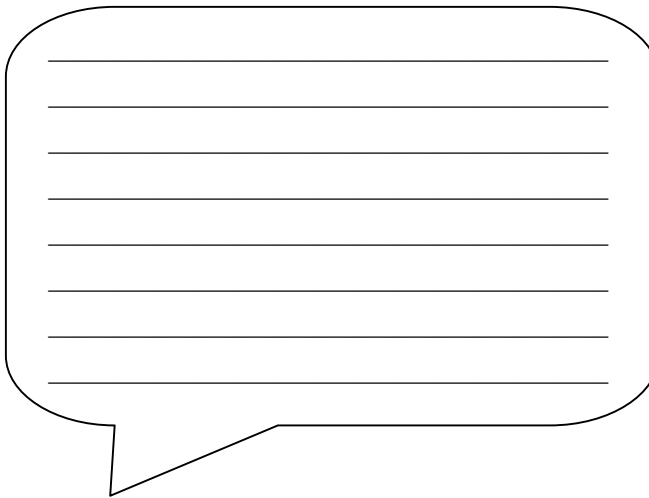
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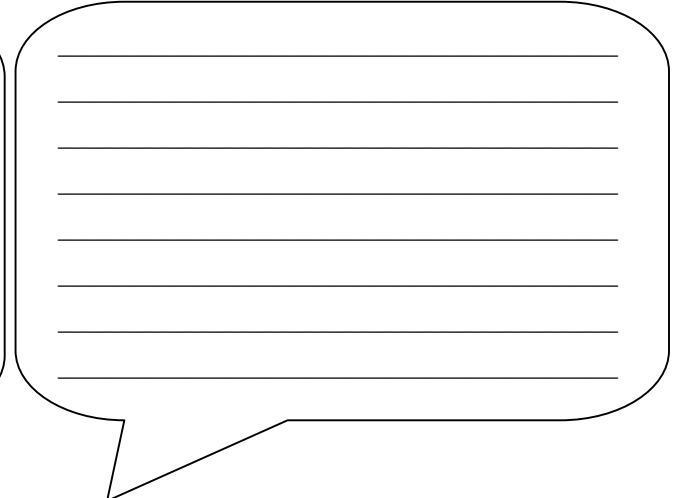
## **“Point Descriptions”**



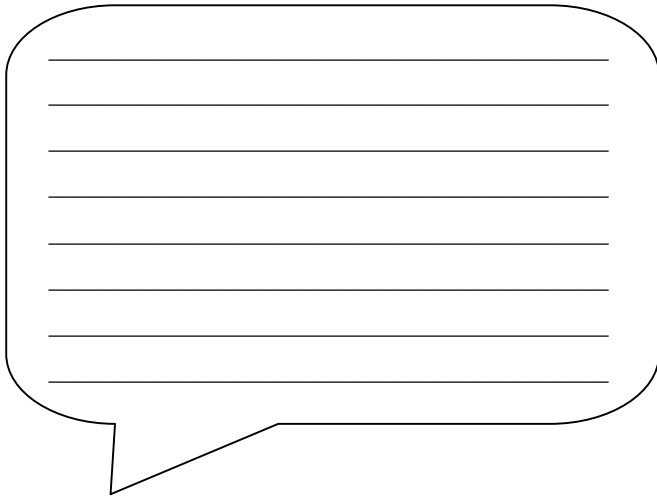
A speech bubble template with a rounded rectangular body and a small tail pointing downwards and to the left. The body contains ten horizontal lines for writing.



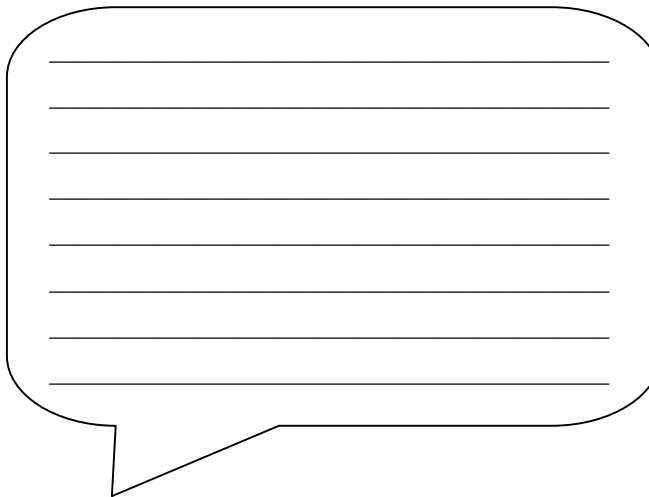
A speech bubble template with a rounded rectangular body and a small tail pointing downwards and to the left. The body contains ten horizontal lines for writing.



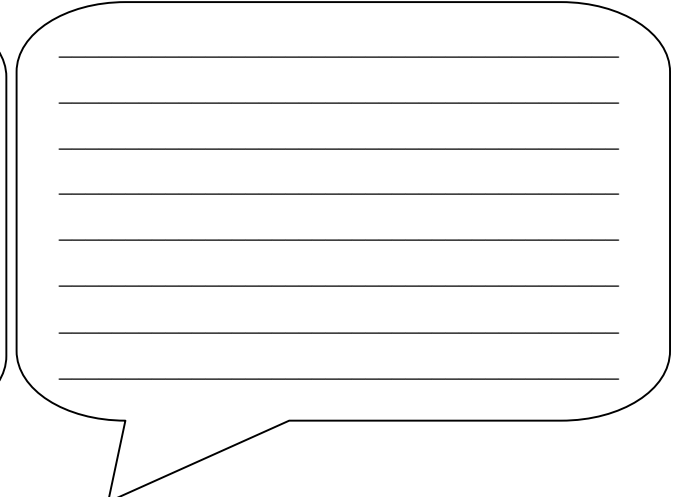
A speech bubble template with a rounded rectangular body and a small tail pointing downwards and to the left. The body contains ten horizontal lines for writing.



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A speech bubble template with a rounded rectangular body and a small tail pointing downwards and to the left. The body contains ten horizontal lines for writing.

## Sequence 3 – Competency 2

### Seeking a balance between park **use** and the **protection** of the marine environment

#### Interprets a territorial issue

Evaluation criteria	A	B	C	D	E
Reference to elements that are relevant to the territorial issue (task 1)	Identifies the <b>names of the 4 groups</b> , their <b>objectives/interests</b> and <b>actions</b> in a very satisfactory manner	Identifies the names of <b>3 groups</b> , their <b>objectives/interests</b> and <b>actions</b> in a satisfactory manner	Identifies the names of <b>2 groups</b> , their <b>objectives/interests</b> and <b>actions</b> in an acceptable manner	Identifies the name of <b>one group</b> , its objectives/interests and actions in an unsatisfactory manner	Does not provide any information on the group
Demonstration of the dynamics of the territorial issue (task 3)	Outlines the <b>positions</b> and <b>proposals</b> of the <b>4 groups</b> in a very satisfactory manner	Outlines the positions and proposals of <b>3 of the groups</b> in a satisfactory manner	Outlines the positions and proposals of <b>2 of the groups</b> in an acceptable manner	Outlines the positions and proposals of <b>one group</b> in a unsatisfactory manner	Does not outline the positions and proposals of the groups
Expression of a well-founded opinion (task 4)	Gives a very satisfactory <b>opinion</b> based on <b>2 relevant findings AND</b> proposes a realistic <b>course of action</b>	Gives a satisfactory <b>opinion</b> based on <b>2 relevant findings AND</b> proposes a realistic <b>course of action</b>	Gives an acceptable <b>opinion</b> based on <b>1 relevant finding AND</b> proposes a somewhat unrealistic <b>course of action</b>	Gives an opinion that is not based on relevant findings <b>AND</b> proposes an unrealistic <b>course of action</b>	Does not express an opinion

Reference to elements that are relevant to the territorial issue: \_\_\_\_\_

Demonstration of the dynamics of the territorial issue: \_\_\_\_\_

Expression of a well-founded opinion: \_\_\_\_\_

## Sequence 3 – Competency 2

### Seeking a balance between park use and the protection of the marine environment

#### **Interprets a territorial issue**

While drawing your sketch, you will have noticed that there are numerous groups of people interested in the marine park. Their interests are diverse and can sometimes conflict. In the last sequence, you are invited to examine in greater detail the activities and points of view of four major players involved in the marine park. Viewing the videos will provide information on the four main groups of local players with a stake in the marine park. Each group defends its point of view on the issue of balance between use and protection.



## Task 1: Describing the issue

First read the **Objective/Mission** text box for each actor. Then watch Videos 1 to 4. After you have viewed them, you must do the following: Identify the players by writing their names in the text boxes to the right of the figures. Associate each action with one of the actors.

1-

### **Objective/Mission:**

To increase the level of protection of the ecosystems for conservation purposes, while encouraging its use for recreational, educational and scientific purposes



2-

### **Objective/Mission:**

- make profit
- protect marine mammals

4-

### **Objective/Mission:**

Contribute to the development of the tourism industry  
Promote a better understanding of the population's needs



3-

### **Objective/Mission:**

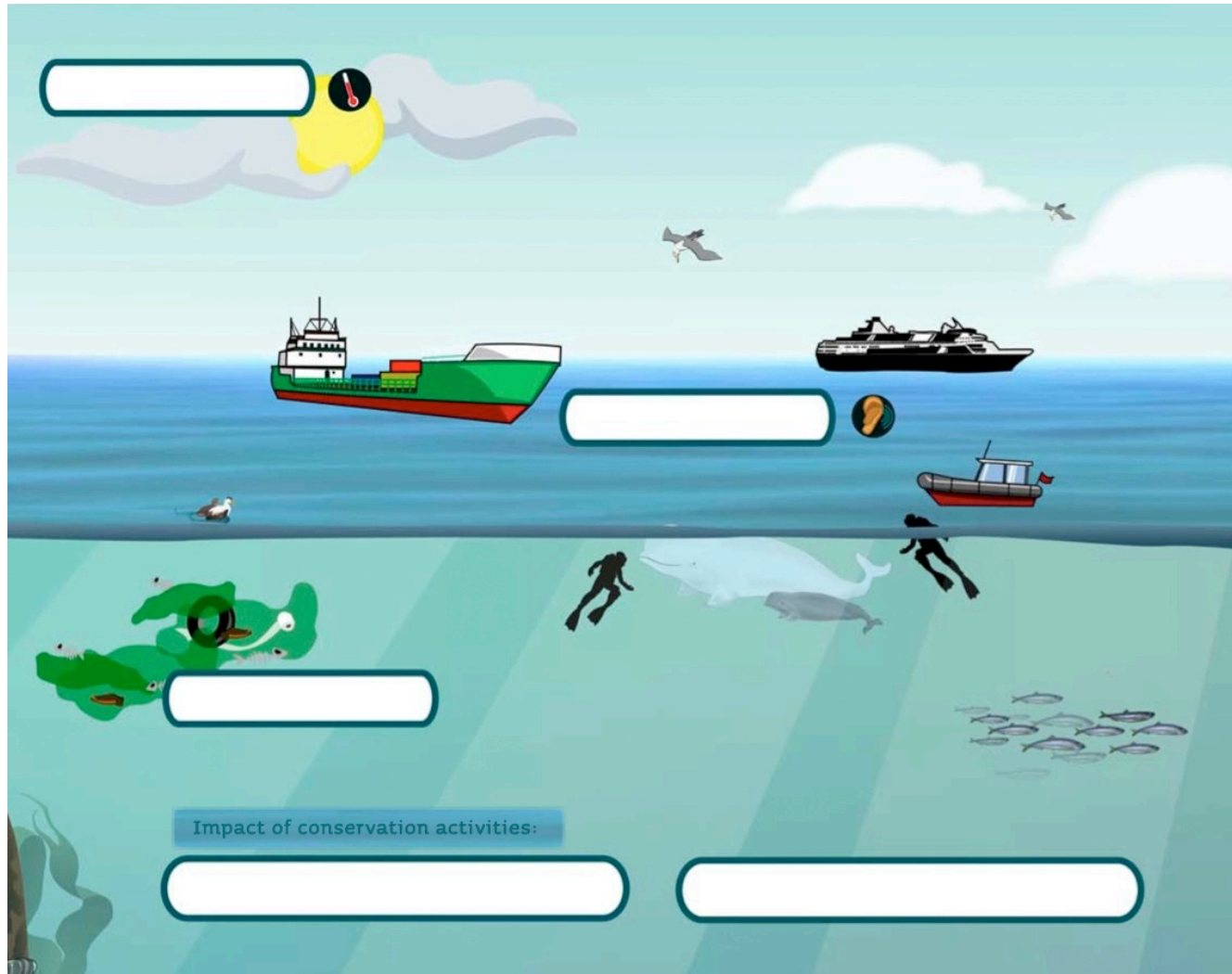
Increased protection through greater understanding

Actions/Players	1	2	3	4
Sets up educational projects such as interpretation centres and a Web site				
Establishes an approach distance to the whales				
Provides mandatory training for cruise ship captains				
Takes tourists on sea tours to observe marine mammals				
Serves on marine park committees				
Conducts research projects, beginning in 1985, on the habits of marine mammals and the impact of human presence				
Adapts its work methods to conform with park regulations				
Its park wardens can issue tickets to enforce the law				
Imposes a maritime speed limit in the marine park				
Is part of an industry that has provided transport for 284 000 visitors in 2008				
Calls for the creation of a people's advisory committee				
Issues a marine observation licence for a maximum of 59 vessels				
Participates in the marine park's coordination committee				
Lowers fishing quotas				

## Task 2: The dynamics of the marine park

1- Now that you have identified the players in the marine park, you should explore the relations that unite them and the effects that some of the players' actions have on those of the others. View Videos 5 and 6:

- While viewing Video 5, fill out the three "Point Descriptions" in the sketch to identify the factors that interfere with the measures taken to protect the marine park.
- While viewing Video 6, fill out the two "Point Descriptions" at the bottom of the sketch to express the impact that the conservation activities will have.



2- Now that you have identified the factors that hinder conservation measures and the impact of conservation activities, draw a line in your sketch linking each conservation activity with the factor that it affects.

3- Answer the following questions:

What is the origin (natural or human) of the factors that hinder the measures taken to protect the marine park? Explain your answer.

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Are there some factors on which the players in the marine park have not taken action? Explain why.

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## Task 3: The dynamics of the marine park (cont'd)

Listen to what the players in the marine park have to say about the balance between use and protection and the means by which a more appropriate balance can be achieved. Based on your viewing of Video 7, fill out the listening grid that will allow you to understand each player's position on the issue and what the player proposes to achieve greater balance.

### Listening grid for Video 7

Video		7	
Actor		For each player, is there a balance between use and conservation?	What does the player propose to achieve a more acceptable balance?
1	<b>GREMM</b>	Yes <input type="checkbox"/> No <input type="checkbox"/>	•  •  •
2	<b>Municipality of Tadoussac</b>	Yes <input type="checkbox"/> No <input type="checkbox"/>	•  •
3	<b>Parks Canada</b>	Yes <input type="checkbox"/> No <input type="checkbox"/>	•  •  •
4	<b>Tourism industry / Groupe Dufour</b>	Yes <input type="checkbox"/> No <input type="checkbox"/>	•  •

## Task 4: Take action!

In light of everything you have learned about the marine park, **express your own opinion** on the issue of **balance between park use and the protection of the marine environment**.

### A) Do you think that a balance between use and protection has been achieved in the Saguenay-St. Lawrence Marine Park?

To state your opinion, you must use the two observations that you have made during this learning situation.

Given that...

**Observation 1:**

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**Observation 2:**

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... **my opinion** is the following:

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### B) What course of action do you propose to maintain or achieve this balance?

**Proposed course of action:**

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