New regulations for sustainable whalewatching at Península Valdés, Argentina

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ABSTRACT

Whalewatching began informally at Península Valdés, Argentina in 1971. The activity was first regulated by Provincial Law 2381 in 1984. Since then, the number of tourists going on whale-watch tours to see southern right whales on this nursery ground increased dramatically, from 17,446 in 1991 to 113,148 in 2007 (548%). With this increase, changes in many aspects of the activity required that the regulations be updated and adapted to the new conditions. In a previous paper (Sironi *et al*. 2005) we described aspects of the local whalewatch regulations that by the 2000s had become inapplicable and that were analyzed during a workshop held in 2004. Here, we report the progress made in Chubut Province to improve whalewatch regulations from 2004 to the present. We provide a timeline of the history of whalewatching and associated events at Península Valdés for the period 1971-2009, including changes in commercial activity, permits granted to whalewatch companies, regulations, and the main points of the new Law 5714 for the conservation of the southern right whale enacted in 2008 that regulates the activity. We also provide statistics for whalewatching at Península Valdés updated to 2008.

KEY WORDS: CONSERVATION; REGULATIONS; SOUTH AMERICA; SOUTHERN RIGHT WHALE; SUSTAINABILITY; WHALE WATCHING

INTRODUCTION

The diversity of locations and target species where whalewatch operations exist around the world requires that laws regulating the activity be adapted to the local needs and be scaled to minimize impact on the animals. Península Valdés in Argentina is the nursery ground for one of the largest remaining populations of southern right whales (Payne, 1986; Cooke *et al*., 2001; IWC, 2001). The whales are distributed close to shore in shallow waters, where they can be seen predictably from June to December. For this reason, Península Valdés has become one of the best places in the world to watch the southern right whale at close range. Consequently, the demand for whale-watching tours has grown rapidly since the early 1990s (Sironi *et al*., 2005) and the activity has become the main tourist attraction in coastal Patagonia (Rivarola *et al*., 2001). Whalewatching in Puerto Pirámides generated total revenues of over U$D 42.6 million in 2006 (Hoyt and Iñíguez 2008).

The first law that regulated whalewatching at Península Valdés was enacted in 1984 by adapting laws from other countries. With the sustained increase in whalewatching, especially during the 1990's and 2000's, several aspects of the regulations became inapplicable. An evaluation of whalewatching at Península Valdés was conducted during a two-day workshop held in Puerto Pirámide in September 2004 (Instituto de Conservación de Ballenas, 2004; Sironi *et al*., 2005). Owners and captains of the six

whalewatch companies voiced their opinions and suggested changes to the laws based on their daily experiences. Government officials that attended the workshop expressed their commitment to work jointly to update regulations and to improve management of whalewatching by enforcing the regulations more effectively.

This paper reports the progress made in Chubut Province to improve whalewatch regulations from 2004 to the present. A new law to conserve the right whales and to regulate whalewatching was enacted in 2008 and we provide a summary of its main points. We provide a timeline of the main events related to the activity in Península Valdés for the period 1971-2009, and statistics on the number of tourists going on whalewatch tours at Península Valdés from 1998-2009. We also make suggestions to continue improving the experience for the tourists that want to see the southern right whales at Península Valdés.

BACKGROUND INFORMATION

The southern right whale at Península Valdés

During the austral winter and spring southern right whales use the relatively protected waters off Península Valdés as a nursery ground (Payne, 1986). The first whales begin to appear in April – May with the peak numbers of animals being seen between late August and early October. The last whales leave the area for the feeding grounds in December (Payne, 1986). Female right whales typically calve once every three years, and stay on nursery grounds with their calves for two to three months post-partum (Payne, 1986, Best and Rüther, 1992, Cooke *et al.*, 2001). Recent genetic and stable isotope analyses indicate that calves from this population learn summer feeding locations from their mothers, and that the timescale of culturally inherited site fidelity to feeding grounds is at least several generations (Valenzuela *et al*., 2009).

The spatial distribution of right whales around Península Valdés has changed since the 1970's (Rowntree *et al*., 2001). The Eastern Outer Coast of the peninsula was an important nursery area for right whales in the 1970's (Rowntree *et al*., 2001), when the area had the highest proportion of females with calves (Payne, 1986). In the 1980's right whales abandoned the Outer Coast and gradually moved to Golfo Nuevo and Golfo San José (to the South and North of the peninsula, respectively). By the 1990's Golfo Nuevo had the highest proportion of females with calves and few whales were seen along the Eastern Outer Coast (Rowntree *et al*., 2001), a pattern that has continued to the present. Interestingly, the center of the concentration of mother-calf pairs in Golfo Nuevo is located along its northern shore less than 10 km from Puerto Pirámide, the hub of the whalewatch industry in Valdés.

The number of female right whales breeding at Península Valdés was estimated to be 92 individuals in 1971, 328 in 1990 (Cooke *et al*., 2001), 547 in 1997 (IWC, 1998), and 697 in 2000 (Cooke and Rowntree, 2003). The population is growing at a rate of 6.9% per year (Cooke *et al*., 2001). Recent unusual mortality events were recorded in 2005, 2007 and 2008, with up to 100 dead whales in one season (2008), most of which were calves (Uhart *et al*., 2009).

Legal status of right whales and their habitat in Argentina

The southern right whale was declared a "National Natural Monument" by the Argentine Congress in 1988 (Law 23,094). In 2003, it was declared a Natural Provincial Monument of Santa Cruz by Provincial Law 2643, which confers protection to the species and also to all of its habitat in waters of provincial jurisdiction. However, the Provincial government of Chubut has not ratified the national law 23,094, and therefore, it does not apply to whales in waters under Provincial jurisdiction. This includes Golfos Nuevo and San José around Península Valdés.

Golfo San José was declared a Provincial Marine Park by Provincial Law 1238 in 1975. The aim of the law was to protect one of the main southern right whale calving areas. The law was later modified in 1979 by Decree 1713, which made Golfo San José a Multiple Use Natural Area. At present, commercial activities in Golfo San José include: boat-based fishing (diving) for scallops and mussels; small scale coastal fisheries: fishing for *pejerrey* and octopus harvesting in rocky reefs; and mussel cultivation along

the northern shore using structures placed on the sea bottom. These activities employ between 150 and 200 local people, most of whom live and work within the protected area (Sironi and Iñíguez, 2005).

In 2000, Provincial Law 4617 created the Provincial System of Protected Natural Areas in Chubut, and Provincial Decree 1814 designated the Organismo Provincial de Turismo as the enforcement authority of Law 4617. In 2001, the Península Valdés Protected Natural Area was created by Law 4722 and a Management Plan was approved. The Protected Area includes Golfo San José, parts of Golfo Nuevo and an ocean strip around the peninsula under marine protection. Península Valdés was declared a World Heritage Site by the United Nations in 1999.

Statistics for whalewatching at Península Valdés: 1991-2008

The first records of the number of tourists that went on whalewatch tours from Puerto Pirámide at Península Valdés began in 1987. In that year, 5,214 passengers bought boat tickets. The Province of Chubut has made official reports of whalewatch activities since the early 1990's (Losano and Ruíz Díaz, 2009) (Fig. 1). In 1991, 17,446 people participated in boat-based whalewatching. In 2006 this number reached over 100,000 for the first time (107,731 passengers), with its maximum in 2007 (113,148), a 548% increase relative to 1991. In 2008, there was a -10.1% decrease in the number of whalewatchers relative to 2007, totalling 101,743.

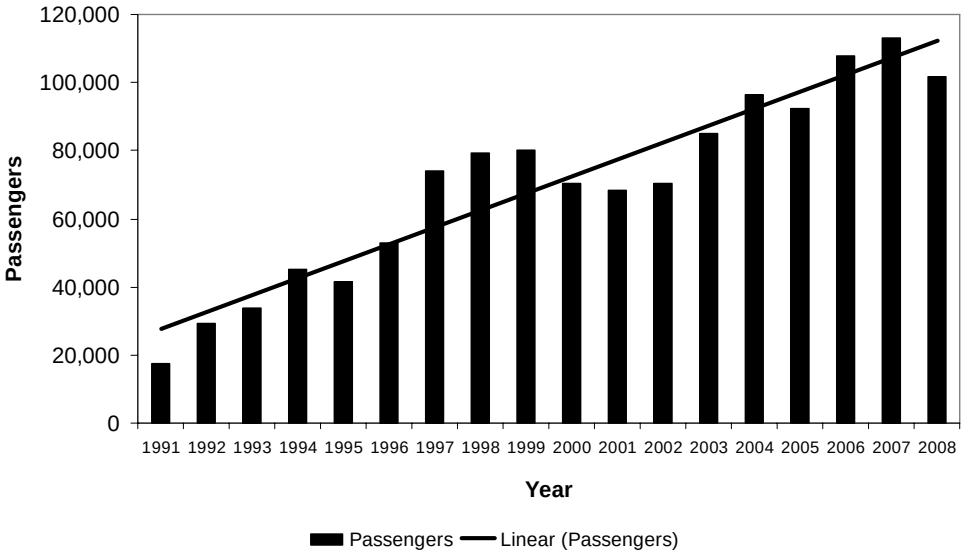

Figure 1: Number of passengers who went on whale-watch tours at Península Valdés from 1991 to 2008 and linear trend.

The official whale-watch season at Península Valdés extends from June to December, which coincides with the right whale nursing season. The demand for whalewatch tours is not uniform throughout the season (Fig. 2), with nearly 53% of the total demand occuring in October and November (58,865 tourists in 2007 and 49,035 in 2008) (Losano and Ruíz Díaz, 2009).

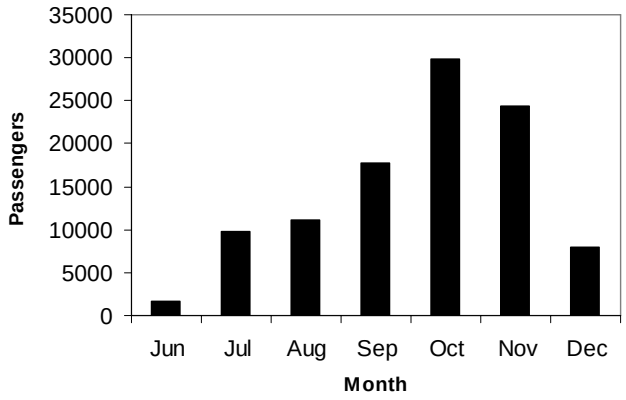

Figure 2: Number of passengers per month who went on whale-watch tours at Península Valdés (average for 2004-2008).

A TIMELINE OF WHALEWATCHING REGULATIONS IN CHUBUT PROVINCE: 1971-2009

Whalewatching at Península Valdés is under the regulation of the Province of Chubut. The laws regulating the activity have changed since the first Law 2381 was enacted in 1984. Sironi *et al*. (2005) summarized the main points in this law and its consecutive amendments. At present, whalewatching is regulated by the new Provincial Law 5714 for the conservation of the southern right whale that was passed on December 21, 2007 and was enacted by Provincial Decree 42 on January 17, 2008.

The following timeline describes the development of whalewatching at Península Valdés and the associated changes in regulations, permits granted to whalewatch companies, related workshops, etc. It ends with the enactment of Law 5714 in 2008, by which six new official permits were granted to six whalewatch companies in 2009. They will operate in Puerto Pirámides between 2009 and 2018.

YEAR	MAIN EVENTS
1971	Whalewatching from boats begins informally in Puerto Pirámides, Península Valdés, Chubut Province, Argentina. Target species: southern right whale.
1984	The approach, navigation, swimming and diving with marine mammals in provincial waters of Chubut is regulated by Provincial Law 2381
1985	Law 2618 modifies article 1 and part of article 2 in Law 2381
1986	The Provincial Regulation Decree 916/86 designates the Enforcement Authority, creates the Register for Whalewatching Companies and the Register for Whalewatching Guides
1993	The Resolution 045-OPT/93 from the Organismo Provincial de Turismo de Chubut calls for the Bidding 01-OPT/93 to grant five official permits for the Service, Administration and Touristic Commercial Exploitation of Whalewatching Trips in waters of Golfo Nuevo based in Puerto Pirámides. From this bidding, the following companies were granted permits: SUR TURISMO S.A (Moby Dick Marine); PEKE SOSA TURISMO DE AVENTURA (owned by Adalberto Sosa); TURISMO HYDRO SPORT (owned by Jorge Schmid). The companies signed the contract with official permission on July 20, 1993 for a period of ten whalewatching seasons between June 15 and December 15 of each calendar year, with the possible extension of the contract for five more years (or seasons). File 111-OPT called for a

	new bidding process 02/93-OPT to grant another two official permits.
1994	The process was declared invalid by Decree 507/94. Three permits were granted directly by Decree 508/94, based on the grounds that there was not enough time to complete the bidding process before the beginning of the whalewatching season on June 15, 1994. The Auditor of the Organismo Provincial de Turismo was authorized to sign the contracts. The following companies were granted permits: HYDRO SPORT (owned by Mariano Van Gelderen); PININO AQUATURS (owned by Fernando and Ricardo Orri); SAFARI SUBMARINO (owned by Carlos Botazzi). The contracts with official permission were signed on May 30, for a period of nine years (seasons) with the possible extension for five more years.
2001	The Organismo Provincial de Turismo publishes the Resolution 97/01 by which the owners of the six whalewatch companies were allowed to renew their permits which expired in 2002. In July, the six whalewatch companies signed the extension of their contracts with the Organismo Provincial de Turismo.
2004	A workshop was organized by the Instituto de Conservación de Ballenas (a local NGO) in Puerto Pirámides in September to analyze the positive and negative aspects of the local whalewatch industry, evaluate problems with current regulations and their implementation, and provide recommendations that would contribute to the sustainability of the activity (Sironi *et al*. 2005). Owners and captains of the six whale-watch companies voiced their opinions and suggested changes to the current laws based on their daily experiences. Government officials expressed their commitment to work jointly to update regulations and to improve management of whalewatching by enforcing the regulations more effectively.
2006	The Secretaría de Turismo from Chubut Province organized a series of monthly workshops during the year. Their aim was to develop a proposal to modify the law regulating whalewatching because it was outdated (from 1984) and because several aspects of the regulations were not applicable to the new conditions for the activity. The workshops were attended by whalewatch company owners, guides, NGOs, government officials, academic and research centers (Centro Nacional Patagónico, Universidad Nacional de la Patagonia San Juan Bosco), and other interested parties.
2007	The Provincial Law 5714 for the conservation of the southern right whale was passed on December 21. This law entitled the Enforcement Authority to grant whalewatch permits through an open and public bidding call for a period of no less than six years, and established the tax that whalewatch company owners should pay.
2008	On January 17 the Law 5714 was enacted by provincial decree 42/08. Provincial Decree 167/08, which regulates the Law 5714, was approved on February 29. This Decree approves the "Patagonian Technique for Whale Watching", which describes the approaching procedure to the southern right whale under the local conditions in Golfo Nuevo, and a "Code of Conduct for Whale Watching". An Ad Hoc Commission was created to elaborate the evaluation criteria for the Public Bidding Guidelines. Members of the commission included staff from the Dirección General de Turismo and the Dirección General de Conservación de Areas Protegidas from Chubut Province, the Instituto de Conservación de Ballenas (a local NGO), and the Prefectura Naval Argentina (coastguards), with assistance from Asesoría Legal and Administración from the Ministerio de Comercio Exterior, Turismo e Inversiones from Chubut. On April 17, the Decree 397 was approved. This Decree authorized the Subsecretaria de Turismo y Areas Protegidas to allow the last whalewatching concessionaires to continue in operation, framed under the contracts that expired in December 2007, until the bidding process concluded, according to Law 5714. The continuation of the whalewatching services was formalized with the six concessionaires in May. In June, once the requirements were established, the organization "Corporación

	Conservación y Desarrollo" performed an external evaluation of the requirements for the whalewatching bidding process, including the compliance with international environmental standards, safety, workers health, social responsibility, etc. This organization created the Smart Voyager Program for tourist vessels in the Galapagos Islands, which was declared as the program to be applied in World Heritage sites by UNESCO. On July 23, the Provision 165-08-SSTyAP approves the Terms and General and Specific Conditions of the Bidding process, setting the cost of the dossier at $5,000. On October 8 the Bidding process was opened under Public Bidding 01-SSTyAP. On November 5, a Pre-awarding Commission was created to analyze the offers. This Commission was formed by fourteen individuals from different areas of the provincial government, that included the Subsecretaria de Turismo y Areas Protegidas, Ministerio de Ambiente Control y Desarrollo Sustentable, Administración de Vialidad Provincial, Dirección de Contralor y Asesoría en Seguridad e Higiene Laboral and Ministerio de Educación. The pre-awarding commission was organized in working sub-commissions to evaluate the different aspects of the bidding terms and to prepare a pre-awarding report. The items that were considered for the evaluation of the proposals were: (1) Planning and Management (formal structure, strategic planning, management, environmental management, business plan); (2) Equipment and infrastracture (boats, land vehicles, building space for customer services on land, storage room, general services, equipment); (3) Human resources (on-board staff, logistic support for boats as required by the Prefectura Naval Argentina – coastguards, on-land staff); (4) Financial (amounts, timeline).
2009	A number of objections were raised during the process, and they were solved. Having met all the legal and administrative requisites, six permits for the Nautical Transportation of Passengers for Whalewatching in waters of Golfo Nuevo based in Puerto Pirámides, Chubut Province were granted on April 15 by Decree 408/09. The six winning companies (in ranked order) were: (1) WHALES ARGENTINA S.R.L; (2) SOUTHERN SPIRIT S.A.; (3) HYDRO SPORT S.R.L; (4) B.K.B S.R.L.; (5) JORGE SCHMID; (6) PEKE SOSA TURISMO DE AVENTURA S.R.L. The Contracts with Official Permits were signed for a period of 10 years (2009-2018). Each contract is specific for each company, according to the six proposals submitted. It is important to emphasize that the six companies are local: five of them were permissionaries from previous periods and a new company (Southern Spirit S.A) begins to operate for this period. The entire bidding and permit granting process is filed under File 136/08 MCET with 6,500 pages.

Progress in whalewatching regulations: Provincial Law 5714 enacted in 2008

During a workshop organized by the Instituto de Conservación de Ballenas in 2004 in Puerto Pirámides, the participants analyzed the regulations and detected points in the Law 2381 from 1984 that had become incompatible with the local conditions for whalewatching at Península Valdés (see Sironi *et al*., 2005 for further details). Some practical problems that were detected included:

- Age class of whales: the law forbade boats from approaching mothers with calves, but mother/calf pairs were approached regularly because they are the most abundant whales on the nursery ground
- Minimum distance to the animals (100m) and maximum number of boats (1) per group of whales were rarely observed.

Government officials acknowledged that new regulations needed to be created specifically for whalewatching at Península Valdés. So, in 2006 the Secretaría de Turismo from Chubut Province organized a series of monthly workshops (see Timeline above) to develop the text for a new whalewatching law that would address these and other practical incompatibilites. After two years of work, the result is the Law 5714 enacted in 2008.

The main aspects of Provincial Law 5714 from Chubut include:

- It is forbidden to approach, chase, sail, swim and/or dive with southern right whales in provincial waters during the calendar year without an official permit issued by the Enforcement Authority.
- Whalewatching should be responsible, and in accordance with the principles for the conservation of the species, avoiding and/or minimizing potential negative effects on the animals.
- The Enforcement Authority grants official permits to applying companies through public bidding for a period of no less than six years, and determines the tax that whalewatch companies should pay to the Province. The totality of this tax should be trasferred to the Fund for the Development of Protected Natural Areas.

The main aspects of Provincial Decree 167/08 that regulates Law 5714 include:

- The Subsecretaría de Turismo y Áreas Protegidas from the Ministerio de Comercio Exterior, Turismo e Inversiones is the Enforcement Authority.
- The area for commercial whalewatching is a 3-nautical-mile-wide strip of the bay between Punta Piaggio and Punta Cormoranes, and boats can operate in and out of Puerto Pirámides only.
- The Enforcement Authority can grant between four and six official permits to commercial whalewatch operations.
- The "Patagonian Technique for Whale Watching" and "Code of Conduct for Whale Watching" are approved (see below).
- Each whalewatch company is allowed to operate with only one boat at any one time with a maximum capacity of 70 passengers. Under certain circumstances, the Enforcement Authority can authorize the operation of a second boat per company.
- A Whalewatching Advisory Committee chaired by the Enforcement Authority with members from the operating companies is created. Its aims are to suggest improvements to the activity and guarantee the principles for resource conservation and sustainable development.
- Infractions to the Law will be fined in accordance to Title VII in the Law 4617.

The main aspects of the "Patagonian Technique for Whale Watching" include:

- The Whalewatch Tour Guides will be responsible for the announcement of safety rules on board to the tourists.
- Right whale mothers and calves cannot be approached until September.
- The following maneuvers are forbidden: separating mothers from their calves or separating animals in mating groups; cornering whales against the shore; circling around the whales; multilpe boat speed changes; drifting on the animals; chasing animals that swim away from the boats; collisions; physical contact between passengers and the whales.
- Only one boat is allowed to approach a whale or group of whales at a time; two boats per whale or group of whales are allowed only under exceptional restricted navigation conditions within the bay of Puerto Pirámides, and after December 1st, when the number of whales is low. In this case, the captains of the two boats will coordinate with each other to stay for no longer than 15 min with the same animals.
- Time restrictions: the minimum duration of whalewatch trips is 90 min with a minimum of 30 min between consecutive trips.
- Speed and distance restrictions: maximum of 20 knots between different sectors of the whalewatching area, and maximum of 10 knots in areas with high density of whales; whales should be approached at cruising speed to a distance of 200m of the animals, then speed should be reduced to less than 5 knots to a distance of 50m, and then speed will be adjusted depending on

the type of group of whales, that may or may not get closer to the boat; in all cases, leaving a group of whales should be at no-wake speed; minimum distances: 30m from the focal whale in a mating group, 50m from a breaching whale, 15m from a tail-slapping whale, 50m from a resting whale.

The main aspects of the "Code of Conduct for Whale Watching" include:

- Whalewatch Tour Guides should inform the tourists the rules of the Code, that are aimed at making the experience safe, educational and pleasant to the visitor.
- Basic rules: do not throw garbage to the water; do not touch the animals; speak in a low voice to enjoy the sounds of nature.
- Copies of the "Patagonian Technique for Whale Watching" are available to tourists from the whalewatch operators and from the Subsecretaría de Turismo y Áreas Protegidas.
- Visitors who observe infractions to the rules can report them directly to the Enforcement Authority.

FINAL REMARKS

Participants at the 2004 workshop (Instituto de Conservación de Ballenas, 2004) recommended that the process to modify the regulations should be inclusive and incorporate the knowledge and experience of all parties involved. The monthly workshops organized by the Secretaría de Turismo from Chubut in 2006 to develop Law 5714 were inclusive and created a forum for open discussions where all participants could voice their opinion. The process built on the experience from whalewatch company owners and captains, government officials, wildlife managers, lawyers, whale scientists, academic institutions, NGO representantives, etc. We think this is essential for the success of any such regulations, and for the process that began in April 2009 with the granting of the six new whalewatching permits for the period 2009-2018.

In the past, under some circumstances when commercial pressure was high (e.g., during long weekends, and after days when the port was closed for safety reasons), two boats per company were allowed to operate at the same time. In these cases, tourist demand drove whalewatching (Rivarola *et al*., 2001) and the Precautionary Principle (Foster *et al*., 2000) was ignored. At present, Provincial Decree 167/08, enables the Subsecretaría de Turismo y Áreas Protegidas to authorize two boats per company to operate simultaneously "for diplomatic, protocol, promotional, educational and research reasons". Under all circumstances, it is advised that conservation priorities and the welfare of the whales should prevail over commercial interests.

There is no interpretation center in Puerto Pirámides where visitors could learn about the whales and the local marine environment before boarding on whalewatch tours. People arrive with unrealistic expectations to watch whales perform the most dramatic behaviors at close range during their short visit in the whales' habitat. It is important to change this attitude with modern educational strategies for the general public. An interpretation center located in Puerto Pirámides, with educational material about the southern right whale based on scientific information, would be a very positive improvement to the whalewatching experience at Península Valdés.

When whalewatch operations are complemented by effective enforcement, surveillance and the opportunity for scientific and education programs, they help bring the message of cetacean and marine conservation to the public while promoting cetacean safety and maximum socioeconomic benefits from whalewatching activities to local communities (Sironi *et al*., 205). Potential impact of whalewatching on the normal behavior of the animals should be minimized to ensure the long-term sustainability of whalewatching at Península Valdés.

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