WORKSHOP ON THE STATUS OF SOUTH AMERICAN SEA LIONS ALONG THE DISTRIBUTION RANGE

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Organizing Committee

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INTRODUCTION AND JUSTIFICATION

The South American sea lion (*Otaria flavescens*), is one of the species of marine mammals in South America that interacts with all human activities, mainly fisheries, aquaculture and tourism. On occasions is also affected by industrial activities and oil extraction and transport. Its distribution in South America ranges from Torres in southern Brazil (29º20´S; 49º43´W; Rosas et al. 1994) to Zorritos (4ºS) in Perú (Riedman 1990), passing through Cape Horn in the extreme south of the continent.

Regarding abundance and population trend there is no uniform information. One of the most studied areas is northern Patagonia in Argentina and with less quality central and southern Patagonia (Crespo, 1988; Crespo & Pedraza, 1991; Dans et al., 2004; Reyes et al., 1999; Schiavini et al., 2004). In the north the population was dramatically reduced for leather and oil between the 30´s and the 50´s, when a population of about 180.000 individuals fell to less of 10.000 around Península Valdés, one of the most exploited zones. Southern Chubut, Santa Cruz, Tierra del Fuego and the Falkland (Malvinas) Islands showed the same population fall, even those rookeries were less or not exploited. During the 60´s a protected areas policy was developed in Chubut and the most important rookeries were protected. The population did not show any sign of recovery up to the early 90´s (Crespo & Pedraza, 1991). At present this stock has increased up to 55.000 sea lions (Dans et al., 2004; Grandi et al., 2008).

In Argentina sea lions interact with gillnet fisheries in Buenos Aires Province where individual sea lions damage part of the catch biting sharks in the belly and consuming the liver but where does not get entangled (Corcuera et al., 1994; Crespo et al., 1994) The same behaviour is shown in northern Patagonia where sea lions interact with longline fisheries in Golfo San Matías (R. González, Pers.Comm.). In central Patagonia sea lions get entangled in trawling nets for hake and shrimp and an estimated figure of 200-600 individuals are taken each year (Crespo et al., 1994, 1997). While sea lions increase at a rate of 5.7% annually (Dans et al., 2004) in Uruguay decline at a rate of 4% (Paéz, 2005) showing a very local effect of mortality, on the other hand a separate population dynamics may exist for this relative restricted zone. In Uruguay as in southern Brazil sea lions are shot by fishermen as a consequence of gear damage and because there is a generalized perception that the species is a competitor for fishing resources.

As it was described for the Steller and the California sea lions, South American sea lions show different rates of increase in different rookeries. Present information about genetic units in the South-western Atlantic is partially contradictory. While some studies did not found genetic differences between rookeries from Uruguay and Península Valdés (Szapkievich et al., 1999) and between Península Valdés and the Falkland (Malvinas) Islands (Freilich, 2004), more recent studies found some degree of isolation (Túnez et al., 2006). Some individual males have been found marked in Uruguay and Buenos Aires Province breeding in Península Valdés. Feeding studies indicate that sea lions use different resources in Uruguay and Buenos Aires Province with respect to Patagonia (Koen Alonso et al., 2000; Szteren, 2006; Szteren & Páez, 2002) leading to think that presumably at least two ecological stocks could exist within the same genetic stock with gene flow based on male transport.

In the extended Chilean coast a population of around 140.000 individuals was estimated (Venegas *et al*. 2001, Bartheld *et al*. 2007, Sepúlveda *et al*. 2007, Oliva *et al*. 2008). As in Argentina the population trend is not uniform. While in nothern and central-southern Chile the population is increasing, in central Chile the population is stable and in the extreme south is declining. In Chile, sea lions interact with artisanal fisheries (Oporto et al. 1991, Rodríguez 2005, Sepúlveda et al. 2007),

industrial fisheries (Hückstädt & Antezana, 2003) and salmon farms (Sepúlveda & Oliva 2005). In general only operational interactions have been considered, recording predation on fishing catches and damage to fishing gear and aquaculture installations. However, even it is known that an important part of diet includes important commercial fish species (Aguayo & Maturana 1973, George-Nascimiento et al., 1985, Sielfeld et al., 1997) the information about ecological interactions is scarce (Arata & Hucke-Gaete, 2005). As a result of these conflicts and an attempt of diminishing interactions with artisanal fisheries and aquaculture activities, an Action Plan and Management of sea lions was developed in southern Chile. However up to date it has not been implemented.

In Perú, the population was subject to uncontrolled exploitation during the first half of the XX century mainly for its leather and fur (Tovar & Fuentes 1984). Exportations of fur between 1925 and 1946 raised several thousand furs per year (Majluf & Trillmich, 1981). The first surveys were carried out during the 50´s (Piazza 1959 cited by Tovar & Fuentes 1984). Later, between 1968 and 1979 the first national surveys estimated a population of about 20000 individuals (Majluf & Trillmich, 1981). Since 1997 an annual record is carried out with a standardized methodology, when 144087 individuals were estimated. This figure lowered in the following year given an ENSO event in 97/98, recording 27991 individuals. In the last three national censuses carried out in 2003, 2004 y 2005 the population was estimated in 75158, 59399 and 100220 individuals, showing a decline first and an increase later in the total number.

At the light of the arguments exposed it seems important to join the sea lion specialists in the region in order to discuss the status of the sea lion population in their own countries, the most important problems they suffer and the potential solutions and courses of action. The identification of vacancy areas in knowledge will be welcome and the clarification of conservation and management policies at the national and international level.

GENERAL OBJETIVES

Assess the status of sea lion population in the distribution area (Argentina, Brazil, Chile, Falkland (Malvinas) Islands, Perú and Uruguay).

Assess regional conflicts between sea lions and human activities (fisheries, aquaculture and tourism).

Assess about administration measures applied to the species and management plans per country.

Assess about priority or vacancy areas in research for conservation and potential financial sources.

SPECIFIC OBJETIVES

Assess population trends along the distribution range.

Identify management units by means of genetic markers, ecological stocks and movements and migration.

Assess impact levels from abundance estimations, mortality rates and predation on salmon farms and fishing gears.

PARTICIPANTS INVITED

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SUPPORTING AND FINANCING INSTITUTIONS

Zoo d´Amneville (France)
Yaqu-Pacha (Germany)
Dutch Zoo Conservation Fund
Subsecretaría de Pesca, Government of Chile
Latin American Society for the Study of Aquatic Mammals (SOLAMAQ)
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