Discrepancies in an Environmentally Controversial Salt Production Project: Local versus National and International Perceptions

During 1994, the Compañía Exportadora de Sal (ESSA; salt export company), a Mexican Federal company with 49% private Japanese capital, planned on the expansion of its activities to the surroundings of San Ignacio Lagoon (SIL) in Baja California Sur (BCS), México (26°41' and 27° 15' N; 113°03' and 113°35' W). This expansion project has been widely commented in the national and international press (1–3). Because of media pressure, the development of this project was postponed during 1995 by the Mexican government authorities in México City, until more detailed studies were completed. These studies were scheduled to be carried out from 1996 to 2000. However, before these detailed, and expensive, studies were totally achieved and because of media pressure, the project was definitively cancelled by presidential order.

This work analyzes most of the information published in the major newspapers regarding the proposed expansion project. We compare this information with technical data from salt production in this region of Mexico, obtained from an almost identical project which operated for 45 years at Ojo de Liebre Lagoon (OLL), located in the same region.

We analyzed most of the articles relating to this issue that were published from 1995 through 1999, in major local (BCS), national (México City), and major international newspapers. During these 5 years we tried to review the local and national newspapers on a daily basis, and the major US and European newspapers on a monthly basis. Articles were grouped into 2 categories: supporting the project and against the project, depending on content and the arguments provided. Articles were also grouped according to the kind of people interviewed. In this case, the categories were: biologists and ecologists, i.e. biology professionals working for universities or research centers; environmentalists, working for nongovernmental organizations (NGO); local farmers, living in Mulegé county, where SIL is located; local fishermen, living in Mulegé county; local state, and county government authorities; local legislators, i.e. state and county government congressmen; international artists, i.e. famous movie stars; and the Federal Mexican Environmental authorities living in México City.

To obtain a more direct overview of local opinion in 1998, we interviewed 50 different people living in Baja California Sur (BCS), including biologists, authorities, farmers, fishermen and legislators. The questions put by the interviewers were: i) Have you been at the OLL salt production facilities?, ii) Do you know that a similar project is proposed at SIL?, iii) Do you believe that the proposed project will affect the grey whale arriving at SIL?, and iv) How long have you been living in BCS? (To avoid ambiguity or duplicity, if a biologist interviewed by the newspaper was working at the time of the newspaper interview as a local authority, then he was considered only as a local authority).

THE SIL SALT PRODUCTION PROJECT

The project consists of the modification of 24 000 ha of hypersaline soil to build shallow ponds 1-m deep (4). These 24 000 ha are located 2 to 5 km from the lagoon. They are covered by naturally impermeable hypersaline soil called "eriales." These eriales are nearly devoid of native flora and fauna (4). The proposed ponds will be filled with seawater pumped from the lagoon. The proposed project will install 8 pumps in the northern part of SIL, which will pump approximately 1 200 000 m³ per day of seawater from the lagoon into the ponds.

Seawater will slowly circulate from pond to pond allowing evaporation by solar heating and air flow. It will need 2 years of slow evaporation and movement of the water from pond to pond until the original marine water arrives at the salt crystallization ponds where the salt will precipitate. The salt produced will be mechanically harvested and transported by a band conveyor system to a pile near the coast for temporary storage. At that place, 25-km north of the lagoon mouth, a dock will be constructed and operated for the loading of the salt into large vessels. To avoid dredging, the dock will be 2-km long to allow large ships to dock.

The first 200 m of the dock will be solid stone, and the remaining length, 1800 m, will be vertical piles placed every 34 m. During operation, only 2 vessel trips per week will account for all loading and transporting of the product to its final destination; thus heavy ship traffic is not expected.

ANALYSIS OF PUBLISHED PAPERS IN PRESS

After announcement of the proposed project, there was strong media response. In a 3-year period, we read and analyzed 120 articles published in local, national, and foreign newspapers. Of the articles published locally in BCS (n = 49), 100% were positive towards the proposed project, whereas almost 100% of the articles published outside BCS (n = 68 of 71), mainly in México City and the USA, were negative.

According to the people interviewed for the news articles, all the local inhabitants (n = 14), all local authorities (n = 12), and local legislators (n = 15) were in favor of the proposed project. Conversely, all México City environmentalists (n = 47), as well as all the foreign international artists (n = 7), were against the project. Most of the local professional biologists and ecologists showed a positive attitude regarding the SIL production project (n = 11 of 13). The opposite was the case for México City authorities (n = 10), and among foreigners all of whom were against this proposed project (n = 68). We believe that most of the writers from outside BCS have never visited the project area and surroundings, and the facilities operating at OLL.

Of all the people interviewed by us (n = 50), who know the OLL salt production facilities (n = 37), all of them (n = 37) believe the SIL salt production project will not have harmful effects on the grey whale population.

The SIL salt production project is almost identical to the salt production facilities that have been operated for 45 years by ESSA, in the same region, i.e. the OLL salt production facilities. OLL is the main destination for migratory grey whales; on average 1200 grey whales yearly (4). Only 300 grey whales arrive each year at SIL (4). The number of grey whales using OLL has increased at an average annual rate of 2.7% since the ESSA facilities began operations (5).

For the local people interviewed, and who know the OLL salt production facilities, it is evident that no negative impact on the calving area for the grey whale can be attributed to salt production activities. Some authors, however, claim that there will be impacts (6).

Our results show how the opinions about the SIL project are clearly divided. Local opinions—from scientists, farmers, fishermen, and local authorities—tended to support the proposed project. Most arguments against the project have come from environmentalists, writers, and artists from mainland México and from other countries, i.e. outside BCS. Practical ex-
This media campaign, with apparently nonlimited economic resources, in- 
fuenced the final decision of the Mexican 
authorities and led to the cancellation of 
the project despite strong local support, 
mainly because in a centralized 
way, the all major decisions 
are taken in the capital, Mexico City.

From the experience at OLL, we 
believe that the cancellation of this 
project will result in lost opportunities of 
economic development in the region, and the 
loss of expansion for the marine birds 
habitat (5). In addition, the habitat of 
the gray whale will not be improved in any 
significant way. However, the cancellation 
of this project will result in several unde-
sirable consequences, particularly in the 
long term, because the human population 
at Vizcaino is increasing and will continue 
to increase. At the same time, develop-
ment opportunities are scarce in this arid, 
isolated area. Some of the major economic 
activities, i.e. fisheries and agriculture, are 
either at their maximum capacity or even 
recently decreasing and, therefore, there is a strong 
need to generate new jobs among 
the young people. Ecotourism, while consid-
ered a desirable activity by most environ-
mentalists, has already been developed by 
foreign companies and is unlikely to 
provide the necessary job opportunities. 
Thus, the cancellation of the project will 
probably lead to increased levels of emigration 
to mainland Mexico and the United States. 
Locally, increasing pressure will be put on 
currently expanded natural resources; par-

ticularly fisheries and groundwater for 
agricultural purposes. Obviously, this is 
clearly contradictory to sustainable 
development of the Reserve.

Certainly, most of the critics of the 
SIL salt production project have come from 
the developed countries. As is clearly 
statied by Vitters (7), theories of "sustain-
able development" usually do not respect 
environmental constraints, and they ignore 
the fact that the developed countries have 
for a long period of time lived beyond 
their sustainability limits. Holl et al. (8) 
suggest that a public understanding of en-
vironmental and population-related issues 
is critical for successful conservation ef-

torts, and that one way to enhance the ef-
fectiveness of environmental education 
worldwide is to tailor the messages to the 
local circumstances.

A number of authors have suggested 
that local communities are the key to at-
taining sustainable economic development 
(9, 10). However, as was observed here, 
international opinion, through media in-
fluence, can easily outweigh community 
perceptions and understanding. Me-
dia distortion can in fact preclude the 
achievement of local community aspira-
tions. Because of the powerful effect of 
international media and press, one envi-
ronmentally-sound project proposed to be 
developed in a Third World country was 
cancelled through the manipulation of 
the public and political opinion by 
emotional press campaigns.

IN SUMMARY

Summarizing data associated with the salt 
production project and contrasting 
these with published media information, 
we conclude that i) local newspapers in Baja 
California Sur support the development of 
the project; ii) articles published in 
Mexico City and foreign countries support 
the cancellation of the project; iii) support 
published in local newspapers for the 
development of this project, is based on bio-

tical, ecological, and socioeconomic data; iv) claims and requests for the 
cancellation of this project published in 
national and international newspapers 
are based on popular claims not necessarily 
borne out by the available scientific data.

References and Notes


7. Hall, K.D., Daily, G.C. and Ehrlich, P.R. 1995. Knowledge and perceptions in Costa Rica regarding an un-
known, popular, and biodiversity issues. Cons. Biol. 9, 1534-1558.

8. Shaffer, R. 1995. Achieving sustainable economic de-
velopment in communities. J. Community Dev. 26, 145-152

9. Smith, G.R. 1998. Are we leaving the community out of rural community sustainability? An examination of approaches to development and implementation of in-

10. This work was supported by the National Council of Sciences and Technology of Mexico (CONACYT). Project No. 109-PF-3507, and the Centro de Investigaciones Biológicas de Baja California. We would like to thank S. Marcso Acedo for his help during our field work, Cecilia Aguilar for her sup-
port during the analysis of the article, Dr. Ulla Glazier for editing the English-language of the text, and Lelita Vázquez for her exsperenctial assistance.

Alfredo Ortega-Rubio, Centro de Investigaciones Biológicas del Noroeste, A. P. No. 128, La Paz, 23070, B.C.S. México. E-mail: aortega@citbah.ar.mx

Daniel E. Lluch-Cota, Centro de Investigaciones Biológicas del Noroeste, A. P. No. 128, La Paz, 23070, B.C.S. México. E-mail: dlluch@citbah.ar.mx

Arndt Casellaun, Centro de Investigaciones Biológicas del Noroeste, A. P. No. 128, La Paz, 23070, B.C.S. México. E-mail: arcc@citbah.ar.mx


http://www.ambio.kva.se