ANGLO AMERICAN CHILE

Chagres Smelter Division

REPORT
Streamlined Socio-economic Assessment (SEAT) in the five Production Divisions of Anglo American Chile:
Chagres Division

Casa de la Paz Foundation
Agreements for a Sustainable Living Together

CASA DE LA PAZ

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1 Introduction

1.1 Overview and Objectives.

The purpose of this work was to perform a streamlined socio-economic assessment of Anglo American Chile's Chagres Division operations and to develop management responses to the central or key issues that are identified in this field in order to improve the economic and social performance of the company and to include sustainable development concepts within the core business strategies.

This assessment was performed between June and August 2004 using a methodology provided by the corporate office. It has been designed to achieve the objectives defined and described in the "Streamlined Socio-Economic Assessment" (SEAT) document. The use of the tools provided by this methodology jointly with the Casa de la Paz Foundation expertise in project social assessment, community relations and citizen participation allowed collecting and systematizing the information required to complete the assessment.

The implementation of this methodology intends to contribute to the improvement of the socio-economic sustainability and in turn, to the establishment of a baseline for more sustainable alliances.

1.2 Report Structure and Contents.

The structure and content of the report is the following:

Chapter 3: The objectives and approach of the streamlined assessment process is established, explaining how it was applied to the Chagres case.

Chapter 4: A profile of Chagres operation is presented, including basic information about the Smelter, the existing social management systems and the community investment programs.

Chapter 5: A profile of the neighbour communities is presented, including the communes of Catemu, Llay Llay, Panquehue and San Felipe.

Chapter 6: Details are given for the economic and social issues and impacts identified in the operation.

Chapter 7: Details are given for the economic and social issues and impacts identified by the stakeholders.

Chapter 8: The assessment of key issues and their impact is presented, linking what was identified in the stakeholders' survey with the Chagres Division activities. The importance of the issues from the stakeholders' viewpoint is reviewed. Priority impacts and issues are identified together with the adequacy of current social investments in the community. Lastly, comments are made about the closure planning.

Chapter 9: A profile of the response and management measures recommended by the assessment team is provided. These measures focus on priority issues identified in the assessment process.

Chapter 10: The performance indicators developed in the assessment process are presented, indicating how they can be used in the follow-up and monitoring of the socio-economic performance of the operation.

Chapter 11: Details are provided for feedback contacts and additional information.

2 Objectives and Approach

The objectives of the streamlined socio-economic assessment (SEAT) are the following:

Streamlined Assessment Objectives

- To identify the socio-economic impacts and problems that need to be managed.
- To evaluate the current initiatives, provide success and efficacy inputs and to identify where could improvements be implemented.
- To become a useful tool to develop a Plan to interact with the Community.
- To provide an analytical structure to help operations to assess their global sustainability, especially to balance the natural resources mining with social and human capital improvement.
- To ensure that the "best practices" requirements are fulfilled and shared within Anglo.
- To provide a planning tool to manage the social and economic impacts of the operation, including social investments and the final closure of the Division's operations.
- To collect and classify data that allow generating corporate social reports and developing indicators that are relevant for the local conditions.

The approach used in the assessment is aligned with the following five steps defined by the methodology:

Step 1: Defining the objectives of the streamlined socio-economic assessment.
Step 2: Creation of a profile of the facilities and community and identifying key issues.
Step 3: Determining key issues and socio-economic impacts.
Step 4: Providing guidelines in management responses to key issues and impacts.
Step 5: Report generation.

The Project started in each Division with a meeting with the main staff of the Division, the consulting team and the corporate counterpart. In that opportunity the scope and the main objectives of the methodology were explained and the multitask team that carried out the assessment process jointly with the company was introduced. The meeting was led by the corporate counterpart.

Later, a working meeting was held with the division counterparts defined for the study in order to define the area of influence of the specific operations and to identify – based on predefined criteria – the main stakeholders associated to those operations. These criteria are based on the SEAT methodology proposal and on the consultant's expertise in the subject. The minutes for those meetings are readily available.

A key aspect in the application of the streamlined assessment approach is the survey made to previously identified stakeholders and to Anglo staff. A team made up by an anthropologist and a social assistant made the direct field survey work with the stakeholders within the area of influence. The geographic scope in Chagres Division

included stakeholders from Catemu, San Felipe, Llay Llay and Panquehue. The stakeholders and surveyed individuals list is provided in Annex 1.

Parallel to this, the team engineers surveyed key staff individuals such as the Production Manager, Environmental Manager, Human Resources Manager, both through group and individual meetings.

The information presented in this document gathers the opinions of more than 25 persons among the Division's staff and inhabitants of neighbour communities chosen in a manner that allowed having a representative sample of the various types of stakeholders related to the Smelter's activities.

3 Profile of the Operation

3.1 Basic Information on the Operation. (Table 4.1.)

Chagres Division is a copper smelter that started its operations in 1917. It's located in the Vth Region in Chile, in the Commune of Catemu and near the town of Llay Llay, 100 km to the north of Santiago city.

Historic Profile – Chagres Smelter	
1917	➢ Start of Operations.
1946-1960	➢ Smelter shutdown.
1963	➢ First environmental regulation Standard in Chile, only applicable to Chagres.
1972	➢ Acid Plant start-up (70% sulphur recovery).
1986	➢ Commissioning of the expanded environmental monitoring system
1992	➢ Putting in force of Supreme Decree N° 185, first legal body of
1995	environmental character applied to mining activities.
	➢ Completion of expansion Project for US$ 214 million. Reverberatory
1998	Furnace replaced by Flash Furnace technology.
	➢ Commissioning of double absorption Acid Plant (96% sulphur
2000	recovery), US$ 13.7 million.
	➢ Starting of anode production, US$ 8.1 million. Installation of a new
2003	Refining Furnace.
2004	➢ Approval of Environmental Impact Declaration (DIA) for the Chagres Optimization Project.
	➢ ISO 14001 certification (ongoing)

The concentrates processed by the Smelter mainly come from Los Bronces and El Soldado Divisions, also Anglo American-owned sites. The average contents are: 30% copper, 31% sulphur, 22% iron, 10% silica and other minor elements. The smelting process allows to eliminate iron and sulphur from the concentrate and to preserve copper. The end product is anode copper. In addition, sulphuric acid is reclaimed as a by-product from the application of sulphur dioxide (SO_2) emissions abatement technologies.

In 2003 production amounted to 160,111 tons of copper. 88% corresponded to Anodes and 12% to Blister copper. Sulphuric acid production was 436,707 tons. To achieve this production, 550,000 tons/year of concentrate were fed into the Smelter. 100% of the copper production is exported.

A new and modern Smelter with Flash smelting technology (Outokumpu Flash Furnace) was started up in 1995. It includes a large-capacity acid plant and the installation of an economically competitive process that is compatible with environmental regulations. This investment amounted to 200 million dollars.

Currently there are 507 persons working in Chagres. 287 are own personnel and 220 are contractors. 54% of the own personnel and 84% of the contractors in Chagres Smelter live in neighbour towns of Catemu and Llay Llay.

During 2003 investments in capital projects in Chagres amounted to one million four hundred thousand dollars (US$ 1.4 million).

3.2 Existing Closure Plans.

There is no fixed date for the Smelter closure. The period to end the operation is indefinite. The technology life cycle is nearly 35 years, and this period could become a decision milestone for the owners. Therefore, the owner should evaluate if he invests or not in renewing the technology, maintaining a competitive Smelter, continuing with the technology available, making potential future upgrades or going out of the business.

On the other hand, on February 2004, the Mining Safety Regulation issued on December 30, 2002 was published in the Official Gazette (Decree N° 132 of the Ministry of Mining). This regulation is also applicable to smelters. According to Title X in this Regulation, the company must submit a Mining Sites Closure Plan for all its operations in the year 2009, including Chagres Smelter. This Plan will be reviewed every 5 years (Article 23). Sernageomin must enforce the compliance of the commitments made. It's worth noting that Sernageomin's approval is fundamentally related to mining safety issues. Therefore, under these terms and additional to safety issues, it's important to indicate that a closure plan also has a high environmental and social impact.

At present, MWH consulting company is developing the Closure Plan for Chagres Smelter as a first exercise to define the measures and actions to execute at the end of operations at a conceptual level.

3.3 Social Management Existing Systems (B1 and C1 Tools)

3.3.1 Commitment with Social Responsibility and Community Interaction Plan

The responsibility for the social issues management currently belongs to the Human Resources Manager that reports to the Division's General Manager.

Anglo American Chile's commitment with the Social Responsibility value is expressed in the daily activity of Chagres Smelter through good business practices in three major areas: (i) in the labour area, (ii) in the environmental area and (iii) in the community area.

3.3.1.1 Labour Area

The company practices positive dialogue with its employees and supervisors in order to prevent conflicts. Anglo American Chile respects the right of its employees to form unions. So much so that about 93% of its workers belongs to one of the nine unions in the company.

The Chagres Employees' Union operates since the 80s and is formed by 192 members working in all of the working areas of the company in administrative, operating and maintenance activities. The union is funded through the contribution made by the members and a contribution made by the company once a year consisting on a fixed amount per member registered in the union. These resources are essentially used in leisure and recreational programs, in cultural projects and in training.

The Chagres Employees' Union belongs to the Union Federation that groups the 6 unions of the Central Zone, amounting to approximately 1,300 AA Chile workers.

On the other hand, in the human resources policy, actions are considered in training, occupational health, safety and risk prevention, incentives, welfare and recreation.

Regarding labour excellence, the Division recently carried out a technical skills evaluation process in Smelting and Refining and started a labour audit to contractor companies; in addition, the company participates in the Regional Users Counsel and provides continuous improvement awards to its workers.

3.3.1.2 Environmental Area

In the environmental area, Chagres Smelter has permanent relations with CONAMA and enforcement agencies and has accepted environmental commitments to improve air quality and waste treatment, among others. Chagres is in the process of ISO 14001 environmental certification during 2004. Among the most relevant environmental emissions regulations and requirements, Chagres Smelter must comply with the following ones:

Regulations and Requirements
Arsenic Emission Standard, Supreme Decree N° 165/99
Surface Water Discharge Standard, Supreme Decree N° 90/01
Underground Discharge Standard, Supreme Decree N° 46/03
Sewage Water Discharge Standard, Supreme Decree N° 609/99
Health Service Resolution, completar

In addition, the Environmental Management System indirectly includes some social impacts associated to environmental issues.

3.3.1.3 Community Area: Annual Community Interaction Plan

Chagres Division has developed and maintains an Annual Community Interaction Plan oriented to neighbour communities, primarily Catemu.

Community Interaction Plan, Chagres Division, 2003

General Objective

To receive the society's authorization to operate; it involves:

- Developing operating policies and procedures that emphasize the commitment with our stakeholders based on principles of respect and on an open and transparent communication.
- Searching for the mitigation of the environmental impact caused by our operations.
- Improving the social and economic benefits of affected communities.
- Participating (collaborating) in the development of the communities and their capabilities.

Strategic Objectives

Maintaining the operating / environmental leadership of the Smelter in the country, contributing to the development of an agricultural valley essentially oriented to the export of "clean" production.

Strategies:

- Maintaining a favourable attitude from the neighbour communities towards the Division's operations and projects, especially by the Catemu community, the nearest one to the operations and the one that has the highest interaction with the site.
- Promoting the creation of small businesses and inclusion of new technologies in agriculture and livestock production in San Felipe and its communities, contributing to an improvement of the family economy.
- Anticipating and neutralizing potential conflicts.
- Responding to the communities' authorities and the communities in general.
- Influencing the development of environmental regulations and their subsequent application.
- Adjusting the public exposure according to the community's objectives and the public opinion.

The central purpose of this plan is to contribute to improve the human and production capital of the commune and strengthen its development and progress through technical support, training and funding of the municipalities' initiatives, educational centres, public wellbeing organizations and other organizations in the zone. The plan includes the objectives and the scope of the relationship with the community, but doesn't include the form and the resources required to materialize it.

The Division has interacted with the following major institutions and community organizations during the last two years:

- Catemu and Llay Llay Municipalities
- San Felipe Governor's Office
- San Felipe, Catemu and Llay Llay Police Force (Carabineros)

- Aconcagua Health Service
- Agricultural and Livestock Service (SAG), Vth Region
- CONAMA, Vth Region
- SERNAGEOMIN
- San Felipe, Catemu, Llay Llay and Puchuncaví Fire Departments.
- Mothers', Elderly and Disabled Centres
- CAD
- ADSOCAN
- San José Sports Club

At present, when the community wants to ask questions or has any concerns, it has direct access to the Division and/or through the Municipality.

Normally, a person or community representative that wants to talk about any issue with the Company, approaches the Division's Entrance Control and contacts the person in charge of External Affairs that personally or by telephone contacts him/her to give an answer. In any of the cases, the concern is recorded in writing. The answer given can be made verbally (through the telephone or personally) or by writing (note). Finally, a follow-up is made and later, contacts are made (meetings) to verify if he/she has received a proper answer.

3.3.1.4 Situations that have arisen in the past that can affect the relationships with the communities

Among the circumstances that have happened in the past and that can affect the relationship with the communities, there are legal conflicts with the community in relation to gas emissions from the Smelter's operation. Those emissions were blamed to be causing harmful effects on soil quality, agricultural production and the people's health.

In 1995, the old reverberatory furnace smelter technology was replaced for the new Flash Furnace technology. This replacement, and in general the global plant modernization, opened the possibility to treat the high SO_2 content gases in the acid plant instead of releasing emissions to the atmosphere. This meant increasing the sulphur content from 76% to 95% as an annual average and to significantly improve air quality in the Smelter's surroundings, as shown by the monitoring data obtained from the network approved by the Health Service.

3.3.2 Investment Initiatives existing in the Community

3.3.2.1 Good Neighbours Policy

The company has a Good Neighbours Policy defined in the following terms: "The good neighbours policy consists on making the company, as part of the community, accountable for the improvement of the social and economical conditions of the surroundings, not only offering good quality jobs, but also investing in the human capital of the commune of

Catemu in particular and the province of Aconcagua in general, through education, training and community welfare within a broad scope of environmentally and socially sustainable development".

3.3.2.2 Community Relations Program

In line with the communal local development needs and plans (considering ecological and sustainable development indicators), Chagres Smelter has driven a Community Relations Program that includes the following project portfolio:

- Technology Transfer Project for small farmers from the commune of Catemu (Beekeeping and Goat raising)
- "Valle Hermoso" Environmental Education and Community Participation Project that involves the DAEM.
- Technical Training Project for students from the Chagres High School (jointly with INACAP).
- Technical-Professional Training and Job Creation Project (Apprenticeships).
- Technical-Professional Education for Trades Training Project (Sence)
- Educational Risk Prevention lectures from workers at Schools.
- Soccer School for commune's children headed by workers.
- Support to emergency offices in the commune (Fire Departments, Police, etc).
- Participation in the funding of projects that allow the self-financing and development of community organizations and others.

The selection of the social investment initiatives is made by the General Manager jointly with the Human Resources Manager, who make a proposal for the programs, projects and activities to be considered. The budget associated to these investment initiatives in the community under execution in the year 2004 is US$ 173,250. The budget is summarized in the following table:

Social Investment Initiatives Budget

Stakeholders	Action Plan	Year 2004 Budget (US$)
Communities of Catemu, Llay-Llay, San Felipe and Puchuncaví	TECHNOLOGY TRANSFER PROJECT	22,250
	"VALLE HERMOSO" ENVIRONMENTAL EDUCATION PROGRAM	60,000
	TECHNICAL-PROFESSIONAL TRAINING	13,000
	APPRENTICES COURSE	28,000
	PRACTICUM AND THESIS PROGRAM	35,000
	GRANTS PROIGRAM AND OTHER INITIATIVES	15,000
TOTAL		**173,250**

4 Profile of Neighbour Communities

The communes that form part of the area of influence of Chagres Division operations are characterized by their poverty. According to the CASEN 2000 survey, they are between 7 and 10 percentage points above the regional average for inhabitants in poverty conditions. The economy is dominated by agriculture and agroindustry, and during these last years there has been an increase in fruit orchard and vineyard activities.

4.1 Definition of the area of influence

A key issue to start applying the streamlined assessment approach is the definition of the area of influence of the particular Division's operations. To define the area of influence, criteria related with the area of operations were established (list of the operations involved in each production Division). The criteria were the stakeholders issues (the affected and interested parties and authorities) linked to the company's operations, the geographic issues (related to the location of the operations and residential criteria of the stakeholders); and lastly, also taking into account issues related to the type of impact (environmental, socio-economic, political impacts, among others).

The scope of the area of influence in Chagres Division included the Commune of Catemu (Santa Margarita, Catemu, Chagres, San José towns), Communes of San Felipe (commune head), Llay Llay (commune head) and Panquehue (commune head and Lo Campo town). Annex 4 includes and updated report with the socio-economic categorization of the zone as indicated by the 2002 Census.

4.2 Methodological aspects of the community profiles description

This chapter intends to underline the main socio-economic, historical, cultural and organizational attributes of the populated areas in the communes under study and that are considered part of the area of influence of Chagres Division. For this purpose, two territorially relevant levels were identified: the commune and the town.

The information analyzed comes from various reference sources: statistical information collected from the 2002 Population and Housing Census, sectoral Socio-Economic Categorization Information (CAS) and the information from the 1997 Agriculture and Livestock Census. In addition to this, instruments were created to obtain qualitative information to get the information from key stakeholders about the towns, their way of living and their perception about the company. The outcomes of this last stage are further developed in Chapter 7 in this report.

The instruments that were created included the following dimensions:

Dimension	Components
i. Geographic	Human groups' distribution and spatial structure of their relations. Communication and transportation flows.
ii. Demographic	Population and employment. It considered the categorization of the population at commune and town level strictly from the viewpoint of demography and employment, identifying the most significant changes.
iii. Anthropological	Cultural identity and forms of organization. It included the identification and description of specific phenomena that define the cultural specificity and community dynamics in the zone of influence of the project.
iv. Socio-economic	Categorization of the major productive activities; economic and exchange relations. Markets. It considered the description of the operation and dynamics of major goods and services markets associated to the local economic activity.
v. Basic social welfare	Access to basic services. Access to a natural environment. Access to a built environment.
vii. The Company.	It included the company knowledge, historical and current relations and impacts produced.

Annex 2 includes the files by Commune and Town (if applicable) with a description of the current situation of the communities in the area of influence, following the format proposed in the Methodology.

4.3 Relevant aspects obtained from the diagnostics of socio-economic conditions of the population located within the Division's area of influence.

4.3.1 Relevant aspects at communal level

a) Low schooling rate in the population

According to the information from the 2002 Population and Housing Census, Catemu inhabitants show a schooling rate lower than the ones recorded in the region. Only 24.9% of the 20 or more years old population ended their high school in any of its types (scientific-humanistic, technical or commercial) and only 6.2% reached the technical or university level compared with the region's level, which reaches 19%.

b) Low demographic growth

For the commune of Catemu it's possible to see a population growth during the last decade (7.23%) that represents one half of the growth seen in the Province of San Felipe (13.31%) and somewhat less than one half the growth of the region (11.4%), showing a territorial relative stagnation in this aspect.

c) Importance of internal displacements

Within the communal space there are seasonal migrations linked to the agricultural labour cycle, having maximum migrations during harvest. In addition, there are displacements inside and outside the commune due to educational reasons that reflect the deficiencies and quality differences of the school system.

d) Prevalence of the agricultural activity

The economically active population is mainly linked to agriculture (41%). This proportion increases in the different towns identified within the area of influence, notwithstanding the drop of the aggregated sector's importance during the last decade (-9%). On the other hand, employment in mining or related activities is not significant within the population (2.79%) and is much lower than other activities such as construction, education and trade.

From the viewpoint of the type of jobs seen in agriculture, during the last years there is a rather clear trend: while in 1992 male labour mainly worked as qualified agricultural workers (47%), in 2002 there was a change in the structure of jobs in this area, where jobs were mainly given to unqualified workers (34%). This implies that there is a consolidation of a productive pattern that is more technology-oriented, with not much creation or maintenance of permanent jobs (qualified jobs) and a strong orientation to seasonality concentrated in specific periods of the year.

e) Changes in land property and forms of production

The rural sector of the commune has suffered a permanent change process that started with the Agrarian Reform and that continued with the division of lands and the current boom of fruit production in the valley. The change in land use from pastures to fruit production is significant, especially in inclined lands. Currently livestock production is not very relevant among productive activities. It is concentrated in a small number of farms without land (i.e., using stables).

f) Land transfer and farm salaried workers

In the study area it's possible to see a historical farm property division to plots less than 20 hectares due to the successive agriculture crises and the lack of technical and financial support. The farmers that were assigned plots originated in the subdivision of the settlements started transferring and subdividing their properties to people from outside the zone (among which Chagres Division is located), making it unviable to have profitable productions in the acreage they control, therefore generating the compulsory need to sell the labour of family members to the current owners and to sell it in other towns inside and outside the commune. In some cases the land transfer also produced a concentration of resources in growers that had more than 1000 hectares (76.3%).

g) Basic services coverage

The broad basic services coverage must be noted (98% of urban houses and 92% of rural houses have electrical lighting and 98% of urban houses and 86% of rural houses have water coming from the public network), with the exception of the sewage water disposal systems that only reaches 76% of all houses.

4.3.2 Relevant aspects at the level of each town

The aspects mentioned in the former paragraphs are common to all the towns studied, however, for each one of them; it's possible to note some particular issues:

4.3.2.1 Catemu

- Due to its urban condition that allows a better access to educational centres, the town of Catemu has better schooling rates than the rest of the towns, also generating a pole of attraction for services, an weakening the quality of education in rural zones.
- As in other sectors of the commune, the work force mainly has jobs in agriculture, although in a lesser degree than in the rest of the towns studied (29.36%) and in a depe3ndent character, namely, under a salaried condition. As it could be expected from an urban settlement, services, construction and industry are also relevant for employment purposes.
- The employment structure, mainly agricultural jobs determines the high seasonal mobility of the economically active population inside and outside the commune.

4.3.2.2 San José

- The low schooling rate of the population in this town is noticed, where only 27.8% of the inhabitants 20 or more years old completed their high school and 53% only completed their elemental school.
- From the viewpoint of jobs, there is a higher proportion of active women in domestic activities if we compare them with the rural communal or regional population. Due to the existence of a higher local labour demand resulting from the land use structure, the salaried farmers have more working opportunities in the town itself, fact that limits the displacements, making it different from other towns (only 11.6%, including students).
- Considering the activity branch, agriculture is the major source of employment. Family agriculture, namely, the one that creates jobs for the domestic work force is practically nil due to the sale of the land plots. The CORA estates of approximately 5000 square meters remained in the hands of the original plot owners and they are mainly dedicated to residential purposes and self-consumption (family orchards).
- Finally, its calls our attention to observe a high percentage of extended families (where 3 generations live together), a situation that happens in 25% of the households.

4.3.2.3 Santa Margarita

- Regarding schooling, there is a better level in Santa Margarita that is believed to be because the town is nearer to Catemu's urban centre and therefore with better possibilities to have access to educational centres.
- The lack of work is more noticeable than in other towns (11%). The scarcity of job sources determines a high displacement to other towns (23% of the inhabitants leave the commune, including students).
- Agriculture includes 60% of the active population, working under salaried conditions (52%).
- 84% of housing corresponds to households, and as in other situations, there is good access to basic services (water and electricity).

4.3.2.4 Chagres

- The sector called Chagres shows a male rate that is lower than in the other towns.
- The unemployment recorded is lower than in other towns in the area of influence (4.55%), however, there is a higher proportion of persons working at home, and that takes to think that there is a higher proportion of individuals with permanent jobs.
- Displacements outside the town and commune for working reasons or studying is high (43.41%), mostly corresponding to workers.
- The activity branch that dominates is agriculture (22.31%) with a strong prevalence of salaried work. Mining has the second place with 14.88% and gives employment to the most qualified labour in town.

- There is full access to basic services regarding electricity and incomplete access to other services, especially water sewage systems.

5 Key Issues and Impacts Identified at Chagres Smelter (C1 Tool).

5.1 Employment (C5 Tool, Table 4.5).

5.1.1 Total employment

The tool designed for the job creation calculation allows to measure direct employment, indirect employment, indirect social employment and both local and non-local induced employment. The calculation is shown in the following table:

Chagres Smelter
Jobs created in 2003

Type of employment	Number of workers
Direct employment	287
Indirect employment created through contractors	220
Induced employment through the purchases of direct and indirect employees	50
Total Employment	557

Thus, the calculations show that Chagres Smelter creates at least 557 jobs. This calculation doesn't include jobs created though supplier companies or the social indirect employment created by the social investment activity.

Actually, an important performance indicator of social investment projects is the amount of jobs created in neighbour communities, and for that purpose it's necessary to have appropriate follow-up and information systems. Training, development and education projects and activities (i.e., the apprentice program) contribute to the improvement of the employability of the recipients. It's important to drive new projects that aim to the creation of more jobs, such as the case of productive entrepreneurship projects.

On the other hand, it is estimated that the Division's social investment projects generate 3 to 4 jobs per year in the organizations that execute those projects (as input).

5.1.2 Origin of the Employees

Regarding the origin of Chagres Smelter employees by town, the distribution is the following:

		% Major Communes					
Group	Total N°	Llay-Llay	Catemu	San Felipe	Quillota	Calera	% Foreigners
Managers	6	0	1	1	1	0	0%
Professionals	24	1	4	5	2	1	0%
Middle level employees	17	0	4	3	3	0	0%
Workers	240	85	60	37	22	17	0%
TOTAL	287	86	69	46	28	18	0%
	100,0%	30,0%	24,0%	16,0%	9,8%	6,3%	0,0%

54% of Chagres Division staff lives in Catemu and Llay Llay. 32% is distributed between San Felipe, La Calera and Quillota,. 84% of contractors live in Catemu and Llay Llay. However, the company doesn't have a policy to prioritize the hiring of local labour.

5.1.3 Salaries

The average annual salary of a Chagres Supervisor, without including Isapre (health insurance) or AFP (pension funds) was US$ 46,170 in the year 2003. On the other hand, the average annual salary of a Chagres employee, without including Isapre (health insurance) or AFP (pension funds) was US$ 23,647 in the year 2003, as calculated from the following table with the date supplied by the company:

Chagres
2003 salaries
Figures in US$

	Supervisors	Employees	Total
Base salary	1.977.123	2.299.371	4.276.494
Benefits	180.570	3.246.767	3.427.338
Mutual/TP	12.319	129.139	141.458
Total salaries	2.170.013	5.675.276	7.845.290
Total Persons	47	240	287
Average salaries	46.170	23.647	27.336

Note: Doesn't include Isapre or AFP

Regarding health insurance and pension funds, for the Los Bronces, El Soldado, Chagres and Santiago staff the annual average per person in the year 2003 in AFP + Isapre was US$ 4,575. There's an important difference in salaries between the company's employees and contractor employees. At least 100 workers of contractor companies earn the minimum wage.

5.1.4 Employees' benefits

The Chagres employees' benefits are the following:

Chagres Employees Benefits (¿?)
- Dentist and medical benefits for the employee and his/her family. - Meals at the smelter. - Transportation between his/her home and the smelter. - Christmas presents for employees and their children. - Education, training and scholarships for employees and their families. - Collective insurances. - Awards for seniority. - 13th salary. - Christmas, Independence Day and March bonuses. - Life insurance.

5.1.5 Social Capital Development and Protection

Labour Relationships.

According to the Chairman of Chagres' Union of Employees, the relations with the company are optimal. As a union they feel listened to and they recognize that the company makes major efforts to have a good level for its workers and to cooperate with the community. In general, the collective bargaining processes are carried out in a space of respect. Regarding the relationship existing between employees and contractors, they recognize that the company has been a pioneer in the integration of workers, so much so that all directly contracted employees or contractors share the cafeteria, restrooms and in general there are no class differences among employees. In addition, the company has cared for the contractor companies to maintain a level of benefits and working conditions for their workers. The company is permanently concerned for its workers and their health and safety conditions in the various production activities.

Training and Education.

In the year 2003, 6,109 hours of training were provided to 217 employees in the company with a total cost of US$ 40,159.

Training and Education to the Company's Employees
Chagres

	2000	2001	2002	2003
No. of employees trained	565	359	358	217
Employees' training hours	11.706	7.348	2.045	6.109
Employee training expenses in US$	109.942	79.330	80.520	40.159

In this same period, 30,680 training hours were provided to 52 employees of contractor and supplier companies, with a cost of US$ 32,937.

Training and Education to External Individuals (Scholarships)
Chagres/Catemu

	2000	2001	2002	2003
No. of individuals trained	100	95	80	52
Training hours received	55.000	50.350	57.600	30.680
Employee training expenses in US$	29.706	37.418	42.434	32.937

Staff Safety and Protection

The Division applies stringent safety and protection standards to its staff, its contractors and suppliers, its customers and to the community in general. The smelter has a safety, occupational health, environment and quality management system that gives a balanced and systematic approach of proactive controls to prevent operational risks. The OTTO approach is used (Zero Tolerance, Zero Target) together with continuous improvement, allowing achieving excellent safety indices. These programs involve the own workers and contractors' workers in order to have an "accident-free workplace". Chagres Division obtained NOSA (National Occupational Safety Association) certification corresponding to three platinum stars.

5.2 Suppliers and Contractors (Table 4.2).

In rough terms[1], it is estimated that in 2003, the amount of domestic purchases for Chagres Division reached US$ 63.7 million. US$ 7,54 million, 11.8% corresponded to goods and services procured from the 16 major suppliers and contractors in the Vth Region.

Currently, Chagres Division has no policies or procedures to prioritize or favour the selection of local suppliers and contractors versus the ones that come from other places in Chile.

Major items bought in the Local community in 2003

	Item	2003 US$	Supplier name	CITY
1	Power supply	4.552.000	Hidroeléctrica Aconcagua	
2	Operating support, industrial cleaning, warehouse	671.800	Ruperto Vásquez	El Melón
3	Civil Works, electrical & mechanical services	414.100	Patricio Collao (Pacoll)	Llay Llay
4	Natural Gas	402.200	Energas	Valparaíso
5	Mechanical maintenance support	391.400	Soriva	Llay Llay
6	Workshop spare parts	206.694	Mecánica Bacigalupo y Cia. Ltda.	Valparaíso
7	Various works	155.100	Bettoli,Nexxo, Sermamin, Ordenes	Quillota, Viña, Valpo.
8	Workshop mechanical repairs	146.300	Mecánica Bacigalupo y Cia. Ltda.	Valparaíso
9	Lab support service	122.100	MG Ltda.	Viña del Mar
10	Mould Stripping	118.412	Soc. Industrial La Calera Ltda.	La Calera
11	Workshop mechanical repairs	101.300	Osorio Hnos. y Cia Ltda.	Quillota
12	Workshop spare parts	90.627	Osorio Hnos. y Cia Ltda.	Quillota
13	Clay	58.216	Nicasio Beasain	Llay Llay
14	Various works	43.900	Delgado, Fuentes, Cortés, Vega, otros	Catemu-Llay-Llay
15	Crucible repairs	26.200	Inversiones RVL	Viña del Mar
16	Light truck repairs	13.200	Kovacs	San Felipe
17	Hardware sundry	11.914	Narciso Goiri y Cia. Ltda.	San Felipe
18	Extra quality cement	8.983	Cemento Melón S.A.	La Calera
19	Charcoal	1.344	Nicasio Beasain	Llay Llay
	Total	**7.535.789**		

[1] The total purchases of Anglo American Chile reached US$ 404.8 million. It was not possible to obtain this information for each Division. Therefore, an estimate of the amount of purchases by Division was made in the following manner: (i) the operating cost per Division was estimated; (ii) for each Division this operating cost was added up to its capital expenditure; (iii) this figure was added up for the five Divisions, obtaining and aggregated value; (iv) the percentage distribution was calculated for the operating cost + capital expenditure by Division; and (v) it was assumed that the amount of purchases is equally distributed.

Added Value (C3 Tool).

The smelter's contribution in added value to the Chilean economy during 2003 was US$32.993.073. It was calculated based on the details of the following table:

Added Value Calculation (year 2003)

Item	2003 US$
Operating results (1)	10.700.000
+ Staff cost (2)	7.845.290
+ Depreciation and amortization	14.387.783
= Added value	**32.933.073**

(1) Results before interests, taxes, dividends and net from exceptional items
(2) Staff cost includes salaries, social security – AFP, ISAPRE – and other staff expenses

The components (items) in this table allow determining which is the wealth distribution among the different stakeholders: (i) operational results for shareholders (32.5%); (ii) staff cost for the employees (23.8%); and (iii) depreciation and amortization for capital providers (43.7%).

5.3 Impact on the Economy

Chagres Smelter has a significant impact on the national economy, not only in terms of the contribution of its production to the added value, but also through the creation of demand. The estimate of this contribution is shown in the next table and it reaches a total amount of US$ 74.8 million.

Chagres
Total contribution to the Creation of Demand in the National economy in 2003

Item	2.003 US $	Notes
Salaries and benefits to the employees	6.533.623	Salaries + benefits – social security
Expenditure in domestic suppliers	63.738.493	Gross estimation
Social investment (expenses or grants)	173.250	See table: Interactions with the Community 2004
Locally withheld taxes (in Chile)	4.418.424	See table: Taxes
Total Contribution	74.863.789	Gross estimation

5.4 Taxes and Royalties (C4 Tool).

Chagres Smelter is subject to taxation benefits and costs. In 2003 the Division contributed with US$ 4.4 million in taxes and duties as shown in the table below:

Locally paid taxes and duties

Type of tax	2.003 US$
Income tax	
Net Added Value Tax	4.285.611
Others to be specified	
Patents and contributions	132.813
Total paid taxes and duties	**4.418.424**

5.5 Major Impacts Identified in relation to the Division's operations.

Chagres Division has an Environmental Management system that provides formal tools and procedures through which it's possible, among other issues, to identify the relationships between its activities and the potential associated impacts.

Together with identifying the operation's impacts on the environment, the Environmental Management System provides information to manage those impacts and provides tools to follow-up and evaluate the outcome of the measures adopted to control and/or mitigate those impacts in case they are negative. On the other hand, they allow identifying improvement and optimization opportunities for the positive impacts within a general framework of continuous improvement of the environmental performance of the Division's operations.

Considering that an important part of the operation's impacts on its socio-economic setting has an environmental character or a relevant environmental component, the information recorded in this Management System formed part of the information that gave origin to this section.

To all intents and purposes, based on the information provided by its Environmental Management System that is currently in the ISO 14001 certification process and the information provided by the Division's counterpart, the potential social impacts associated with the operation have been identified. The table included below summarizes this information, identifying if there are associated management measures to mitigate those impacts and who may be potentially impacted by these issues; and further on, in chapter 7, a review is made to check if these issues have been surveyed in the consultation process.

The relevant impacts of the Smelter's operation are associated to air quality and its potential relationship with the population's health and soil quality, and the transportation of inputs (concentrates) and outputs (sulphuric acid).

Relevant aspects associated to the Division's operations

Activity	Aspect of the activity that causes the change in the local context (Change mechanism)	What change it causes in the receiving environment	What social or economical impact results from this change?	Who is affected/impacted?	Is there an efficient control measure?		If there is a control measure, please describe it.
SMELTER AND ACID PLANT							
Gas emissions (SO_2, Lead in air, As) Particulate matter emissions (PM-10) Black smoke emissions Lab gas emissions (SO_3)	Gas discharges to the atmosphere (Flash furnace, Gas train, HLEs, Converter, Raffinate) Fugitive emissions to the atmosphere from the smelter's facilities, mainly SO_2 (exhaust from the conversion bay)	Drop in air quality and alteration of natural conditions of the soil through deposition	Negative effects on the people's health. Negative effects in the agriculture productivity. Economic loss potential for growers on one hand, and on the other hand, job losses for salaried agricultural workers. Negative perception of the environmental performance due to visible smoke. Sanctions by the authority.	- Population: Neighbour communities (urban Catemu, San José, Sta. Margarita, Lo Campo-Panquehue) - Smelter's workers - Agricultural producers - Salaried staff in farms	X		There's an on-line monitoring network complying the authority's specifications, with stations in Lo Campo, Sta. Margarita, Catemu and Romeral. The plant has contingencies procedures with operational control. Operations are subject to air quality (SO2, PM10, Pb) and emissions (As) standards to be complied with, periodically reporting to the authority (Monthly SO2, and PM10 reports and As and S balances). There is a 2004 Action Plan to report to the authorities and community leaders about measurements, measures and projects executed in the operation.
Slag pit handling (Smelter slag, ex abatement plant slimes) Handling, reception and storage of concentrates	Contact of slag with irrigation water. Air and soil quality due to concentrates emission with sizes smaller than 10 μm	Impact on the water of the canal that crosses the slag deposit. Decrease in air quality and alteration of the soil's natural conditions. Increase in dust concentration in the zone.	Drop in irrigation water quality. Soil pollution, alteration of irrigated agricultural products' quality. Health of the community from impacted communities and in agricultural activities.	- Population: Neighbour communities (urban Catemu, San José, Sta. Margarita, Lo Campo-Panquehue, urban Chagres) - Smelter's workers - Agricultural producers - Salaried staff in farms	**X**		The canal water intake will be taken elsewhere, downstream from the slag pit. There is an emissions cadastre. In the 2004 Action Plans there is provision for its updating and dissemination. In the concentrates handling system there are covered hoppers and conveyor belts with encapsulation at transfer points.
Noise	The Smelter operates 24 hours a day. Another important source of noise is the railroad traffic.	Increase of noise levels in the zone.	Deterioration of quality of life.	Immediate neighbours (Luis Cruz Martinez) They mainly complaint for the train noise.	**X**		Compliance of the DS286'84 Noise Standard (mixed industrial zone). Existing 2004 Tree planting plan: planting tree curtains that attenuate noise. The train circulates to transport anodes produced in Chagres Smelter and other products that are not associated to the Smelter's operation. Clear up if the passing of the train will happen anyway (namely, if those products that are not associated to the Smelter still determine the passing by of the train) in order to define if complaints are associated to the Smelter or rather to the train actually

Activity	Aspect of the activity that causes the change in the local context (Change mechanism)	What change it causes in the receiving environment	What social or economical impact results from this change?	Who is affected/impacted?	Is there an efficient control measure?		If there is a control measure, please describe it.
							passing by.
Solid industrial waste: the major ones: Acid plant slimes, Slimes from the former factory to treat used oils lubricants ands grease discarded in containers. Scrap Used tires Hazardous materials containers	Disposal of solid waste that are generated in practically all major operations in the Smelter. Lubricant oils spillage.	Checking handling and disposal sites	Checking +/- the waste handling mechanisms. Some of them go directly to the slag pit.		**X**		The acid plant slimes are neutralized and fed into the smelting process. There is a hazardous solid waste management plan that requires their disposal outside the Smelter in authorized places. Part of the slag is crushed and sent to El Soldado. Used oils and lubricants are consumed in the HLE furnace (Check)
Cooling tower's water cooling system. Boiler purges Rainwater collection system	Temperature increase in cooling water discharge points in surface water courses. Rainwater can carry over polluting elements to water courses.	Surface and underground water pollution.	The population's health Hill be affected if this surface water is a source of potable water supply, that seemingly it is not so. The water quality can actually affect the users downstream from the discharge that use irrigation wells or use it for animal consumption. Sanctions from the authority,. Complaints from neighbour communities. Check if these water uses truly are the ones that are mentioned.	Farming producers from the zone.		X	The company must comply with the standards on discharges to surface and underground waters. There is a project to analyze how to manage rainwater, there is a schedule with SISS. Currently, there is a collection system that takes rainwater to a treatment pond where the Cu content is lowered and it is infiltrated to the soil.
Residential solid waste	Handling of waste generated by the operation of the plant's cafeterias. Handling of waste that can be mixed with residential waste (office stationery, etc.)	Final disposal (check) This could be a positive impact if they are recycled in the benefit of an activity with the community (i.e., animal feed, compost, etc.)	Check positive impact	Is part of this recycled? Does it go to landfills? Is there any segregation and sorting? Is there any further recycling? Check		X	The company must follow and complies with the work hygiene standards. There are guidelines to decrease paper consumption, but they are weak. Check for positive / potential impacts associated to the industrial solid waste recycling that can be mixed with residential waste (plastics, papers-cardboards, wood, glass) in the benefit of the community. The company once wanted to support the initiative of creating a collection centre in the zone, but

Activity	Aspect of the activity that causes the change in the local context (Change mechanism)	What change it causes in the receiving environment	What social or economical impact results from this change?	Who is affected/impacted?	Is there an efficient control measure?		If there is a control measure, please describe it.
							the community did not support it (Check).
Residential liquid waste (sewage water). Treatment plant management.	Discharge of treated waters. Disposal of plant's sludge.	Surface water pollution.	Deterioration of the river water quality.		X		The company has a sewage water treatment plant that complies with the Discharge Standard included in Supreme Decree N°.609/1998.
GOODS AND STAFF TRANSPORTATION							
Trucks with sulphuric acid.	Movement of sulphuric acid transportation trucks through local, communal and inter communal streets.	Increase in the vehicle flow, spillage risks due to overturns.	Damage to the residents along the transportation routes. However, there are no accidents in the zone. The most sensitive zone from this viewpoint is Puchuncaví (2 accidents occurred in the last 3 years)	Communities of Catemu, LLay-LLay, San Felipe and Puchuncaví.	**X**		There are safety procedures for transport companies that are more stringent than the Chilean standard. There are procedures to act in case of emergencies in the highway. There is a transport company qualification matrix, but there is no mechanism to record the incident rate that allows qualifying them in this respect. The 2004 Action Plan considers initiatives such as: Workshops on the management of hazardous outbalances: continuing with lectures and drills with own staff and staff from related institutions (hospitals, police, firemen, Municipality). Drills: they are periodically executed. Positive impacts: Equipment donations: They are made to the fire departments. Training of social stakeholders involved in emergency handling.
Trucks with inputs for or from the plant (concentrates, chemicals, etc.)	An average of 50 trucks enters the Smelter on a daily basis. They carry an average load of 30 tons of concentrates coming from Las Tórtolas, El Soldado, Pelambres, El Teniente and Andina. There is another daily flow of 53 trucks carrying an average load of 28 tons of sulphuric acid that is taken to Los Bronces, El Soldado, Oxiquim (Metropolitan Region) and paper and chemical plants in the Metropolitan and	Increase in the vehicle flow, spillage risks due to overturns.	Damage to the residents along the transportation routes. Soil or water pollution risks due to spillages.	Communities nearby the roads.	X		The company requires the application of safety measures in the transportation of inputs and products that allow the compliance to what is provisioned in Supreme Decree Nº 298 that regulates the transportation of hazardous cargo. The procedures that the transport companies must apply include an emergency response plan.

Activity	Aspect of the activity that causes the change in the local context (Change mechanism)	What change it causes in the receiving environment	What social or economical impact results from this change?	Who is affected/impacted?	Is there an efficient control measure?		If there is a control measure, please describe it.
	VIIth Regions. Finally there is an average daily flow of 32 trucks with an average load of 30 tons of material destined to the waste dump. It is estimated that this truck flow will increase 15% as of 2006 due to the Los Bronces expansion.						
EMPLOYMENT							
See former paragraph.							

6 Key Issues and Impacts Submitted by the Stakeholders (B7 Tool).

6.1 Identification of stakeholders in the area of influence

A key aspect in the application of the streamlined assessment approach is the survey made to the stakeholders identified within the area of influence of the company and the gap analysis made by the company's staff. A team formed by an anthropologist and a social assistant made this consultation directly in the field. The geographic scope in Chagres Division included stakeholders from Catemu (towns of Santa Margarita, Catemu, Chagres, San José, Los Cerrillos and Reinoso), San Felipe (head of the Commune), Llay Llay (head of the Commune) and Panquehue (head of the Commune and Lo Campo town). The stakeholders surveyed were the following:

- Cummunal Authorities
- Neighbour and social organizations' leaders
- Officials from public services associated to the operation
- Irrigation rights owners and agricultural producers' leaders
- Beneficiaries from initiatives driven by the Division.

The list of persons surveyed is included in Annex 1. In addition, there is a list of types of relevant stakeholders in the area of influence defined for the actual Division.

6.2 Key Issues Submitted by the Stakeholders according to the categories described in the SEAT Methodology

Below there is a table with a summary of the main issues underlined by the different interviewed stakeholders, classified according to the score proposed by the SEAT methodology for each town that was surveyed.

CATEMU	SANTA MARGARITA	SAN JOSE	CHAGRES	LLAY- LLAY	SAN FELIPE	PANQUEHUE
Demographic change						
- Low schooling rate - Seasonal migrations within the commune due to working reasons	- Low schooling rate - Seasonal migrations within the commune due to working reasons - Rural towns: there is a migration formed by the buyers of CORA plots	- Low schooling rate - Seasonal migrations within the commune due to working reasons - Rural towns: there is a migration formed by the buyers of CORA plots	- Seasonal migrations within the commune due to working reasons	- High unemployment during winter - Seasonal migrations towards agricultural jobs and higher education	- Lack of young professionals	No information was given about this issue nor any subject related to the population's structure
Power Structures						
- The urban zone concentrates the highest amount of organizations in the commune. - Higher involvement of women in management issues.	- Lack of organizations. - Apathy and lack of interest in participating.	- Higher presence of men in leading jobs.	- Weak leaderships, specific organization based on concrete needs.	- Presence of a large amount of neighbour organizations.	- Presence of social, union and business organizations.	- Lack of support from the local government in their demands.

CATEMU	SANTA MARGARITA	SAN JOSE	CHAGRES	LLAY- LLAY	SAN FELIPE	PANQUEHUE
Health						
- There is a good coverage of the population through the primary care network. - Producers: They show a high presence of infant leukaemia.	- There is a good coverage of the population through the primary care network.	- There is a good coverage of the population through the primary care network.	- There is a good coverage of the population in the primary care network.	- There is a good coverage of the population in the primary care network and through the hospital.	- Good health infrastructure and coverage.	- Impact on health in Lo Campo and Llaiquén due to emissions from Chagres.
Quality and availability of natural resources						
- Association of water rights owners: Soil acidification due to emissions from the Smelter.	- Shows high quality deterioration in soils.	- Air quality deterioration taking to the damage of roofs due to rusting.	- Air quality deterioration causing diseases.	- Not mentioned.	- Not mentioned.	- Air quality deterioration causing diseases.
Crime and disorder						
Crime (urban)	Not mentioned.	Not mentioned.	Not mentioned.	Not mentioned.	Not mentioned.	Not mentioned.
Capacity and quality of infrastructure and services						
			Sanitary problems, there is no sewage system; they must dispose of their faeces through a canal that must be unplugged twice a year (JV Chagres)			
Safety risk						
			Concern for potential accidents and explosions in the Smelter affecting the community nearby the site.			
Environmental and social problems factors						
Water and soil pollution due to the emissions of the Smelter and other companies in the zone. Growers Association.	- Not mentioned.	- Loss of some crops without clear cause. Poor condition of roofs due to rusting.	- Noise caused by the train unloading - Dust due to the passing by of trucks and presence of material stockpiling from the company. - Respiratory diseases.	- Not mentioned.	- A study will be made at provincial level to define the impacts of the different companies in the zone.	- Air pollution problems, causing respiratory diseases in children.
Relations between employees and other stakeholders						
They are not relevant	Not mentioned.	Not mentioned.	Not mentioned.	Not mentioned.	Most of the workers in the company uses the infrastructure in services of the commune such as banks, schools, etc.	Not mentioned.

CATEMU	SANTA MARGARITA	SAN JOSE	CHAGRES	LLAY- LLAY	SAN FELIPE	PANQUEHUE
Development and economic change						
- The company doesn't represent a source of Works due to the low local labour qualification. - Seasonal unemployment produced in winter due to the agricultural cycle. - Problems to pay the agricultural credits. - Lack of opportunities to specialize labour. Water rights owners Association: - The agricultural development of the commune is limited by the lack of having exporting companies due to the Smelter.	- Loss of jobs in the company's agricultural plots.	- Not mentioned.	- Seasonal unemployment produced in winter due to the agricultural cycle.	- Strengthening of the agricultural and fruit growing activities and establishment of new industries in the commune. - Development of agricultural identity (environmental certification).	- It's one more company, as many others in the province, it has no special incidence.	- Agricultural and agro-industrial profile.
Major problems of the town / commune						
- Unemployment - Crime (urban)	- Low schooling rate. - Lack of training opportunities.	- Increasing suicidal attempts. - Unemployment. - Lack of recreational space.	- Disturbing noise. - Dust - Respiratory complaints and diseases. - Basic sanitation.	- Unemployment. - Housing deficit. - Lack of development opportunities. - Lack of education / training opportunities.	- Unemployment.	- Unemployment. - Low schooling rate. - Health problems in children's health, asthma and bronchial diseases.
Communities' Relations with Anglo-American						
In general, good relations with the zone's organizations, high involvement levels and cooperation with the municipality and other social organizations. Specific groups have not been approached, such as farmers and water rights owners associations.	Good relations, some families were benefited by the support program to goat producers.	Have participated in information meetings held by the company, they are concerned because they don't know which are the effects of pollution in health or agriculture.	No major relations have been made with the company.	The relations are centred in the municipality and some educational centres.	They don't have major relations with the company.	The company has summoned to meetings. They don't have major relations, but they feel unhappy with the company.
Ethnical and gender relations						
Not mentioned.	Not mentioned.	Not mentioned.	Not mentioned.	Not mentioned.	Not mentioned.	Not mentioned.
Perceived impacts						
They are developed in the next section.						

6.3 Key impacts and issues submitted by the stakeholders

Annex 3 provides a summary of the interviews made to the different stakeholders, defining for each surveyed town name and type of stakeholder, subject of interest, perception of the company and its impacts. From this information and from field perceptions obtained by the professionals in charge of the survey, below there is a summary of relevant issues that are useful to categorize the relations between the company and the community.

(i) The perception of the company's environmental performance improved with the new Flash Furnace technology.

There was a relative improvement in the perception of the environmental performance of the company in the surveyed population with the introduction of the flash furnace technology in 1995. The impression is an idea of "progress". This positive impact or attenuation of a perceived negative impact is mainly mentioned by the Water Rights Owners Association of the Commune of Catemu.

(ii) The Company doesn't contribute to the economy of the commune where it operates (Catemu).

According to the opinion of Catemu's inhabitants, the purchasing of good and services by the company in the zone is very low and doesn't generate significant impacts. The payment of taxes or duties that contribute to the improvement of municipal revenues is minor. In addition, there's the feeling that the company doesn't pay patents or taxes in the commune. This lack of positive impact is perceived both by the municipality's representatives and community organizations, especially in the commune of Catemu, mentioning that the company doesn't generate extra resources for the local administration.

(ii) The company doesn't represent an important source of jobs in the zone.

The company doesn't hire – both directly and indirectly – new workers in the area of influence. In addition, the people in the zone feel they are not qualified for the potential job offering from the company. These comments come from the neighbour leaders and local authorities in Catemu. Only the leaders in the town of Cerrillos mentioned that some people in the sector worked in contractor companies.

(iii) The company's pollution damages agriculture.

The agricultural producers in the zone feel that the gas emissions from the Smelter damage the agriculture due to acid deposition and its impact in soil quality, in the products and the infrastructure (zinc roofs, wiring, etc.). It also damages the micro flora in water canals, a fact that used to cause landslides in the past.

This issue is mainly brought to our attention by representatives of the community of San José and by the Growers' Association of Catemu. From interviews made to the company's staff and some key stakeholders, it's also verified that vineyard owners perceive a negative impact from the Smelter in their activity, both in terms of image and potential pollution.

As an illustration, we can mention that in the 70s, the company had legal claims from Catemu farmers (Riesco family). They claimed that the Smelter damaged their crops.

(iv) Lack of communication and consultation with the community by the company.

In general, people in the zone doesn't know well the operations of the company or its activities to link with the community, notwithstanding in Catemu there is an increasing better communicational perception resulting from the activities made during the last two years. At local level there is an increased contact through the beneficiaries of the company's social projects, but there is a lack of a more organic contact through, for example, formal institutions in the commune, except for the municipality of Catemu and the Fire Department. For example, the Residents' Association of Chagres mentions that they have never visited the Smelter. The mayor of San Felipe mentions that "they have not even introduced the new owners of the company or their representatives". Panquehue leaders mentioned that the company has invited them to know the operations to show them the technology it applies to its processes, but the "don't believe" its environmental performance.

(v) Health problems and their potential link to the Smelter's emissions.

A belief in the neighbour population is that neonate malformations, bronco-pulmonary diseases and cancer are all linked to the Smelter's emissions. This perception is mentioned by the Panquehue-Lo Campo community representatives, by water rights owners and by the representatives of the settlement nearby the company, the Chagres Residents' Association, as been caused by the "company's night emissions". The town of Lo Campo that is close to the operation receives the impact of the Smelter's gas emissions due to the wind direction in the zone. The residents' association in the sector is very active and has formally complained to the mayor for potential health problems associated to the Smelter's operation.

This negative perception has been reinforced by the press news published in August 2004. That publication indicated a relationship between the cancer incidence indices detected in the population and the historical exposure to the Smelter's gases, "despite there are no scientific proofs", as written by the journalist.

However, the local Health Service (Catemu Policlinic) establishes that the zone's inhabitants have higher morbidity indices compared to other zones in the Region.

(vi) Impact of the Smelter on the environment

It is perceived that the Smelter has a negative impact on the environment due to visible smoke, dust and disturbing noise. In particular, the Residents' Association of Chagres mentions the disturbance produced by the noise created by the train operations and also comments about the respiratory diseases caused by the "smelter's smoke" and the dust produced by material stockpiling and truck traffic.

On the other hand, and following what was mentioned in the interviews with the company, the Valley has a high particulate matter index. According to studies, 10% is caused by the Smelter. Other sources are: dirt roads, agricultural activities and burning. It is declared that the Smelter is responsible for 10% of the PM10 in Catemu. The rest is due to other activities.

(vii) Distrust on the company's environmental control.

Particularly in the towns of San José and Lo Campo there is distrust on the measurements made by the company. There is the perception that the company reports to itself, that there is almost no supervision from the corresponding authorities and that filters are turned off at night allowing the company to release emissions to the environment without control. Specifically, the leaders from the Lo Campo-Panquehue community show their distrust on the company's systems to control and measure its environmental impacts.

There is lack of knowledge about the environmental and safety standards and the controls the company must go through.

(viii) Risks associated to the Transportation of Sulphuric Acid

The transportation of sulphuric acid has the associated risk of spillage due to accidents and the noxious potential impact for the environment and people. Two years ago a truck that transported acid to the smelter overturned in Puchuncaví. The acid reached the El Sauce stream that irrigates the plots in the zone. All the water wells were checked in the houses. A water truck was rented for two months by the acid transportation contractor to supply water. According to the sanitary investigation, this incident had a high impact on the population. However, this potential impact is mainly verified by the company. The Panquehue mayor showed his concern for the impacts on the roads; "there is a single road that takes both to Catemu and Panquehue, and up to this moment there have been no accidents, but everybody fears the acid spillage from the trucks…"

(ix) Impacts due to the increasing traffic intensity of heavy trucks.

There is a negative perception about the impact associated to the truck traffic surveyed in the community of Panquehue by the Mayor specifying that "there's concern for the impact on roads… the flow of vehicles and trucks is quite high and if the company expands, it would have an impact on road deterioration and traffic jams". It's not clear if this is related to Anglo American trucks. Chagres community also specified the negative impacts associated to the entrance of trucks that damage the pavement and lift dust.

According to the information provided by the company, the acid truck traffic to Santiago, the traffic from concentrate suppliers to the Smelter and from the Smelter to the port of Ventanas is increasing. It is expected to have a growth of 16% in 2006 as a result from the Chagres production expansion.

An average of 50 trucks enter the Smelter everyday transporting an average load of 30 tons of concentrate coming from Las Tórtolas, El Soldado, Pelambres, El Teniente and Andina. In addition, there is an average daily flow of 53 trucks with an average load of 28 tons of sulphuric acid destined to Los Bronces, El Soldado, Oxiquim (Metropolitan Region) and paper and chemical plants in the Metropolitan and VIIth Regions. Finally, there is an average daily flow of 32 trucks carrying an average of 30 tons of material to the landfill. It is estimated that this truck flow will increase 15% in 2006 due to the Los Bronces expansion.

(x) Crop rotation in lands that belong to the company and their impact in labour.

From the agricultural production viewpoint, the Smelter has become a relevant stakeholder in its surroundings (Sta. Margarita, San José) with its 150 hectares of farm production land, creating seasonal jobs to manage the crops. During the last years, both due to administrative reasons and due to the support to the goat project, a crop rotation was made (from vegetables to alfalfa), drastically reducing the workers' demand. It is estimated that 50 seasonal jobs were lost.

This is reason why the agricultural salaried workers perceive that the company has created a negative impact in the zone when it made the crop rotation in its lands, going from the labour-intensive crop of vegetables to the less-intensive one of alfalfa.

Among the neighbours, there are the ones that put a negative value to the agricultural performance of the company and the goat producers that value the positive role of the company in their activity. In general the latter ones are immigrants from other zones.

(xi) The presence of the Smelter discourages an increasing development of agricultural activities in the valley.

The Panquehue and San Felipe mayors emphasize the agricultural character of the valley and the incompatibility of a more profitable future with the presence of the Smelter.

(xi) Income and labour status differences between the company's employees and the contractors and other workers in the zone.

Based on the company's information, the minimum wage a Chagres employee earns is four times the average salary in agriculture. However, in general it can be claimed that there is no opinion from the stakeholders about the income differences due to the insignificant contact that exists between the commune's inhabitants and the Division's workers as they intervene in different labour markets (agricultural vs. industrial).

On the other hand, there are income and work status differences (social benefits, job stability, belonging to the company, etc.) between contractors and the company's employees. Internally, efforts have been made to narrow this gap, for example, bathrooms and the cafeteria were improved. Before, there were segregated premises for contractors and employees, today both use the same premises and services.

7 Assessment of the Issues and their Impacts

7.1 Connecting the Issues Discovered in the Survey with Chagres Division's Activities

The positive issues discovered in the survey are clearly connected to the operations. We can't talk about positive impacts as such, because they rather refer to a positive action and to visible outcomes from the company to mitigate its impacts and to improve its environmental performance, as it happened with the technology change in the Smelter in 1995.

On the other hand, in general terms we can claim that the population's concerns are mainly centred in work and education issues in general, and they are not connected to the Smelter's activities, with the exception of the Panquehue and San Felipe mayors that emphasize the agricultural character of the valley and the incompatibility of a more profitable future oriented to "good agricultural practices" considering the presence of the Smelter.

Regarding environmental impacts, undoubtedly all of them are directly or potentially connected to the Smelter's operations and they are considered as negative ones. However, regarding their mitigation, the neighbours and growers' leaders perceive a technological effort from the company that has one positive effect; it's the reduction of contaminant gas emissions, strongly evident by the start up of the Flash Furnace in 1995. Currently, the company is in the ISO 14,001 certification process, fact that positively reaffirms its environmental performance. In addition, the company has a very smooth relationship with the enforcement public services.

Another level of economic and social issues and impacts that are negatively perceived (related to the capturing of local labour and contribution to the commune's economy) are connected to the company, but not necessarily to its operations. There are two situations: the first one is that the technology progress made in the operation has the purpose of creating savings in the use of production factors, in this case, work; the second one is that the low profile of the local labour makes the company not to be a source of jobs except in the agricultural activities it carries out. In addition, it's necessary to take into account that the Smelter represents the major industrial activity in the commune, fact that could also generate long term expectations. The company intends to establish policies that encourage the development of local suppliers. In turn, the company has started a series of local projects in terms of training, capability building and technology transfer oriented to improve/create employability conditions.

Lastly, the issues related to the lack of communication and the survey of the community by the company are not subjects that belong to the routine activities of the Smelter, but are part of its policy of getting involved with the community and its communications. This negative observation is rather more related to a lack of a Division's communications policy than to the operations as such. Likewise, the issue of "lack of trust on the company's environmental control" is an observation that also results from the absence of a Division's

communications policy to use within the area of influence, in spite of the fact that the company is complying with the reports and commitments required by the environmental authority. Regarding this issue, it's important to note that during these last years, it has been possible to visualize the company's efforts to open up to the community, with a background of low profile relationships promoted by the administration before Anglo American.

7.2 Importance of the issues from the Stakeholders' Perspective

According to the SEAT methodology, to evaluate the importance of the issues discovered in the survey from the perspective of the key stakeholders, the following categories described in the following table must be taken into account:

Definition of the Importance of the Issues from the Stakeholders' Perspective
An issue shall be considered important if a stakeholder perceives that the subject falls into one or more of the following items: ✓ If it's not easy to solve. ✓ If it implies a direct action against Anglo's operation (i.e., vandalism, activity blockage, public riots, legal actions, press actions, etc.). ✓ If it has the potential to cause a breakdown in the relations with Anglo's operation. ✓ If it causes direct impacts in the life quality or life levels of the inhabitants. ✓ If it implies an emigration far from the operation. ✓ If it has a potential to cause incidents or conflicts among local stakeholders. ✓ If it causes high levels of stress or anxiety in the staff.

The most significant issues from the stakeholders' perspective are the ones related to the Smelters' environmental performance. Among them, outstanding are the perception of damage to the health of the people and crops grown by the population. This perception has formed throughout the history of the Smelter's operation, changing when technology improvements were made, therefore attenuating the possibility of having active attitudes against the company. However, any complaint will be received positively by the population, because this is a sensitive issue and because no studies have been made, or at least they have not been disseminated, that ensure that the company's activity doesn't have an incidence in the population's diseases or in the crops' quality. On the other hand, the valley development perspective based on agriculture has aimed towards a general "marketing" that emphasizes a more ecological production, which in the future would make the image of agricultural crops impossible to coexist with a metals smelter.

7.3 Identification of Priority Issues and Impacts

Based on the SEAT methodology, in order to identify the priority issues and impacts discovered in the survey, from the viewpoint of the company, it's necessary to take into account the categories described in the following table:

Critical Risk Categories
✓ Threat of loss of operating permits
✓ Costs for Anglo's operation
✓ Tense relations with neighbours
✓ Tense relations with regulators and NGOs
✓ Worsening of perceptions of the business units within the Anglo group
✓ Operations interruption
✓ Damage to corporate reputation
✓ Results in a drop in the returns for the shareholders
✓ Results in the non compliance of Anglo's Business Principles

Based on these categories, there is a brief analysis made on the various negative issues and impacts that have been identified, reviewing if they are related or not to the actual category; and if they exist, if they are positive or negative. In general, all the negative issues identified in the survey need priority care (see table below). This is because all of them contribute in some measure to one or more of the key risk categories described. Recommendations how to approach these issues are summarized in Chapter 10.

List of identified impacts and issues	**Critical Risk Categories**																	
	Ensures/Threatens operating permits		Advantages / costs for Anglo's operation		Improves / worsens relations with neighbours		Better / more tense relations with regulators and NGOs		Enhances / undercuts the opinions of the business units within the Anglo group		Allows / interrupts the operations		Improves / damages the corporate reputation		Improves / decreases the profits for the shareholders		Compliance / Non-compliance of "Good Citizenship" Principle	
	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
The company doesn't contribute to the economy of the commune where it operates.						X				¿?				X				X
The company doesn't represent an important labor source in the zone.						X								X				X
The company's pollution damages the agriculture.		¿?		¿?		X		X				¿?		X		¿?		X
Lack of communication and feedback with the community.						X		X						X				X
Health problems and their potential connection with the Smelter's emissions.		¿?		¿?		x		x				¿?		X		¿?		X
Smelter's impact on the environment. (*)		¿?		¿?		x		x				¿?		X		¿?		X
Distrust on the company's environmental control.						X		X						X				X
Risks associated to Sulphuric Acid Transportation.				X		X		X						X				X
Impacts resulting from the increasing truck traffic intensity.				X		X		X						X				X
Crop rotation in the company's lands and its impact on labour.						X								X				
The presence of the Smelter discourages further development of agricultural activities in the valley.		¿?		¿?		X		X				¿?		X		¿?		X

From this table, we can see that among the identified issues and impacts, the major associated risks are mainly related to the relationships with the neighbours, damage to the corporate image and non compliance with Anglo's "Good Corporate Citizen" Business Principles.

7.4 Assessment of Social Investments existing in the Community (C6 Tool)

The investigation about the characteristics of the local population both through primary and secondary information established that there are two situations that explain their high poverty indices. On one hand, the whole community has the lowest schooling rates in the region, showing weaknesses in the educational system and the social network that allows the youth to stay in the school system and makes working possibilities to be more precarious. On the other hand, the employment structure is strongly conditioned by the characteristics of the agricultural sector during the last decades, where permanent qualified jobs have been replaced by less qualified, temporary jobs. This implies that the higher qualification and employability conditions individuals go searching for jobs to other zones of the country, thus creating a vicious circle.

This poses two basic needs for the population. In educational terms, it's necessary to improve the access to elemental and high school study enhancement programs and labor training jointly with the encouragement of agricultural and non agricultural productive activities with higher added value that help in the improvement of the amount and quality of jobs. Regarding the latter, the municipality, being the territorial administration agency, must drive the initiatives required to achieve these objectives, and that takes us to fulfill the need of enhancing the local government management capability regarding its diagnostic functions, plans and programs creation and the public-private articulation.

The community assistance programs' orientation, especially technology transfer, aims towards the detected needs. However, we still need to verify if the productive sectors where innovations are going to be attempted, allows achieving a multiplying effect towards other activities.

Below there is a summary table of the corresponding initiatives, with an evaluation made for each one of them following the SEAT's and the consulting team's criteria

PROJECT	PROBLEM DISCOVERED IN THE PROJECT'S DIAGNOSIS	ADEQUACY OF THE DIAGNOSIS	ADEQUACY OF THE OBJECTIVES	DEVELOPMENT PROCESS	ASSOCIATED POLICY	IMPACT OBTAINED
Valle Hermoso Program	- There is no clear identification of a problem that encourages an intervention. Emphasis is put on the possibility of strengthening local management, improving the management capabilities of local leaders to facilitate the achievement of solutions to the needs.	No elements are provided to allow finding deficiencies in a management area, in particular deficiencies of community stakeholders or to connect these deficiencies to social order problems or needs.	There is no specification about the needs that Hill be satisfied	- In particular, the educational process promotes the local capability development and the inter relations of the community with the company's workers	- Good citizenship principles	- Ongoing project
Apprenticeship program	Youth unemployment due to working experience and complementary training	Consistent with the problems found out in the SEAT diagnosis	They correspond to the underlined problem	The company defined vacancies en communes and schools and a selection process was carried out. Lectures, selection and contracts were coordinated with schools. Sence apprentice program		Ongoing project
Technology transfer Project	PRODESAL diagnostic information was the starting point. From there, it was decided to work with goat and beekeeping with the approval of 2 consultants The Project diagnosis includes only selected producers.	The producer families that exclusively depend on the goat activity are approximately 46. There is a trend to decrease the activity during the last 6 years. Pastures have been replaced by fruit trees. The land tenure makes the activity development to be poorly viable (impossible to make investments). Beekeeping is currently increasing and it is coherent with the increase in fruit tree acreage in the zone (raw material).	There is no clear idea about the importance of training for selected producers that have gone through similar processes. There is no long term sustainability of animal feed or future investments due to the type of land tenure.	Creation of a committee with the different stakeholders to have the management control of the various activities.		Ongoing project
Technical – professional training program	The outstanding problem is youth unemployment	No impact is known regarding the income from beekeeping and drip irrigation.	The trade training is applicable to solve the specified problem.	The different stages have been agreed with the DAEM, the high school and the company. The execution is shared		Ongoing project

PROJECT	PROBLEM DISCOVERED IN THE PROJECT'S DIAGNOSIS	ADEQUACY OF THE DIAGNOSIS	ADEQUACY OF THE OBJECTIVES	DEVELOPMENT PROCESS	ASSOCIATED POLICY	IMPACT OBTAINED
				by the parties		
Trades courses	Courses are selected with the viewpoint of the OMIL, the mayor and the company.		There are no specific objectives created for this initiative.	The funding is agreed on an annual basis with the OMIL and mayor. The project execution is bid.		385 persons trained in trades that improve their employability conditions. There is no assessment regarding the percentage of occupancy or the adequacy of the trades in the labour market.

7.5 Closure Planning (G1 Tool).

As mentioned in Chapter 4, the Smelter's closure has not been planned. The term for the operation's ending is indefinite. The technology life cycle is about 35 years, and that could well be the period to assign a decision milestone for the owners, because at that moment, an assessment must be made regarding the investment on renewing the technology and having a competitive Smelter, continuing with the technology available with its potential future upgrades or going out of the business.

On the other hand, in February 2004 the Official Gazette included the amended text of the Mining Safety Regulation (Supreme Decree N° 132 of the Ministry of Mining) passed on December 30th, 2002, that also applies to smelters. According to Article Xth of that Regulation, the company must submit a Plan for Mining Works Closure that will be reviewed every 5 years (Article 23rd). The first of these plans must be presented in the year 2009. Sernageomin must enforce the fulfilment of the commitments made. It's important to note here that Sernageomin's approval fundamentally focuses on mining safety. In this respect, it's important to indicate that in addition to safety issues, a closure plan also has a big impact from the environmental and social viewpoint.

Currently, the company has hired specialized advisory services to create the closure plans for each one of AAChile's Divisions, including Chagres Smelter. The Chagres Division closure plan will allow defining conceptual actions and works required to be implemented at the closure of the Smelter's operation, although no planning has been made for that closure yet.

The closure plan that is being created according to corporate standards will include at a profile level all the social issues that at this moment are visualized as important in a potential closure of Chagres.

In principle, social issues that have been considered as relevant are those that are related with the workers and their families, contractor companies and neighbour communities connected to the company by services or benefits, both received or delivered, or rather by potentially negative impacts generated after the closure. However, it's worth noting that

given the fact that the service time of the Smelter is more than 35 years, the scenarios associated to socio-economical issues can vary drastically.

Under these terms, it is understood and assumed that the creation of a Closure Plan is an exercise that must be periodically updated and the results obtained by the application of SEAT in AAChile Divisions must become a significant input in the updating of these closure plans, as it allows to identify relevant social stakeholders and impacts and provides a management framework for the company to manage its impacts and relationships with these stakeholders, including site closure as one more impact.

Finally, it's necessary to mention that Supreme Decree N° 132 doesn't mention socio-economic issues at the moment of closure of the sites.

8 Management Responses for the Issues Discovered (Step E Tools)

8.1 The environmental performance of the company improved with the new flash furnace technology

Associated Actions

- Field visits have been organized to learn about the operations, the functioning of the flash furnace in particular and its positive effect in the minimization of the Smelter's impacts caused by gas emissions.

Recommended Actions

- In the communications policy of the Smelter, the introduction of the new technology almost 10 years ago still is an asset that can be leveraged to demonstrate the improvement of the company's environmental performance.

8.2 The company does not contribute to the economy of the commune where it operates (Catemu).

Associated Actions

- There is a corporate policy that instructs everybody to get license plates in the commune of Catemu for own and contractors' vehicles.

Recommended Actions

- Identifying products and services that can be purchased in the town.
- In addition, it could be possible to develop / strengthen activities to supply goods and services that satisfy the quality level required by the company (supplier development program).
- The company should consider investing in training courses and other support activities for local suppliers to satisfy its quality and suitability requirements.
- Improving the availability and quality of the information regarding the company's suppliers and local purchases that could be used to assess its actual impact on the local economy.

8.3 The company doesn't represent an important source of jobs in the zone.

Associated Actions

- Despite the company doesn't hire local labour directly, it creates indirect labour hiring through contractor companies that render services to the operation.
- Most of the cafeteria purchases in the Smelter are local purchases (Catemu, Llay Llay and others). The company that manages the cafeteria is Sodexho. In addition, there are agreements with hardware stores in Catemu and San Felipe for minor purchases.

- On the other hand, it promotes the development of agricultural and livestock activities through various training programs for the community, improving the beneficiaries' employability conditions, making them more suitable to improve their working conditions. Some examples of this are:
    - ✓ Trade courses on beekeeping, flower growing and others; 17 courses that benefited a total of 330 persons have been held.
    - ✓ Apprentice program, oriented to the youth to assist in their work placement.
    - ✓ Annual practicum program: 20 students.
    - ✓ An Experimental Farm Project has been implemented in Catemu: it includes and investment in Boer goat breeders, good practices training, cheese plant training and slaughterhouse training. It also includes a component on beekeeping development. The project's budget is $ 200 million for 3 years, of which $ 63 million have been spent. At present, the beneficiaries are 22 families in the commune.
    - ✓ Inacap will teach entrepreneurship courses.

Recommended Actions

- The recommendations of the former item are valid.
- To continue promoting scholarships and promoting Technical Training and Apprenticeships.
- Establishing policies for service suppliers to promote the use of local labour.
- Evaluating and follow-up of current training programs in order to measure the performance and impact on employment.

8.4 The company's pollution damages agriculture.

Associated Actions

- In the past, the company has received complaints from farmers. A study was made once with the support of the University of Aconcagua. It determined that the problem was rather associated to crop management.
- It has also developed comparative crops to demonstrate that the poor performance achieved is not caused by the Smelter's impacts.

Recommended Actions

- Supporting the existing technology transfer programs carried out by INDAP and PRODESAL to promote the improvement in the local farmers' crop management.
- Updating the outcomes of the study and comparative crops and disseminating the information in local and regional press media.
- Backing up the creation of a communal environmental committee that produces an environmental issues diagnosis, especially for issues related to agriculture, proposing monitoring systems and receiving the reports created by the stakeholders (residents, farmers, company, services, etc.).

8.5 Lack of communication and survey of the community by the company.

Associated Actions

- The company has a system that collects questions, requests and complaints with responses and measures to work them out; a record is kept.
- Communication meetings are held with the community since 2003. The periodicity has not been defined.
- Meetings are held each time more frequently with the community. During the two last years there has been a substantial increase in field trips to the company resulting from the Open Doors campaign. The policy of the former owners in this area was a low-profile policy.

Recommended Actions

- It is recommended to establish and/or promote regular and sustained spaces for communication, cooperation and exchange with local stakeholders in function of local development and care for the environment. These spaces can be: a Citizens' panel, Local Development Committee, among others.
- It is recommended to promote the delivery of information to the stakeholders regarding the company's operations, managing its impacts and contributions to the local community; for example through Field Visits Plans, Information Campaigns; Open Doors Day.
- Lastly, it is recommended to promote the relations between the employees and the community through corporate volunteer programs.

8.6 Health problems and their potential connection to the Smelter's emissions.

Associated Actions

- Infrastructure support to rural policlinics and rural medical stations in El Seco, Ñilhue, San José, Santa Isabel, Las Compuertas.
- Continuous air quality monitoring.
- Emissions monitoring.
- Water Quality monitoring.
- In Santa Margarita, zone that has the highest impact from the Smelter's emissions, there is an air quality monitoring stations that the Smelter operates to regulate the production to prevent and avoid pollution events.
- The company participates in a local health Committee headed by the Policlinic through which it influences the creation of programs to promote healthy living in the community.

Recommended Actions

- It is recommended to work in communication and consultation actions with the community related to the impacts of the operations on the people's health. The stakeholders must learn about the management systems to mitigate negative environmental impacts and the company must inform the community about the incidence of diseases such as cancer in its current and past workers.

- There is lack of knowledge about the impacts of the long exposure to the Smelter's contaminant gases on the populations' health and agriculture before the technology change. On one hand, it is recommended to provide evidences and release the studies that give information about these issues (environmental studies, demonstration orchards, among others) and, on the other hand, start new studies that are required to clear up these concerns, for example:
    - ✓ Follow-up of health effects on Chagres workers due to the Smelter's environmental impacts.
    - ✓ Emissions cadastre in the surroundings to explain how many of the problems detected in the community and local agriculture can be attributed to the Smelter's activity.
    - ✓
- Extended dissemination of the studies' and research outcomes made in a meeting with the participation of authorities, academia and social leaders.

8.7 Impact of the Smelter on the environment

Associated Actions

- The Division has dust and gas abatement technology.
- It is subject to various controls and enforcement by the authorities regarding its environmental performance.
- It has environmental monitoring systems.

Recommended Actions

- Participative particle and noise monitoring.
- Supporting the creation of a communal environmental Committee, as mentioned in points 3.4 and 3.5 to make a diagnosis on environmental issues, to propose monitoring systems, to receive reports created by stakeholders (residents, farmers, company, services, etc.) and to evaluate potential measures.

8.8 Distrust on the company's environmental control.

Associated Actions

- The SAG and Health Service supervise the company's operations on a technical basis and without previous warning; they check calibrations and measurements made.

Recommended Actions

As in the former point, it is recommended to:

- Have participative monitoring; including social leaders, health officials and communication media.
- Establish and/or promote regular and sustained spaces for communication, cooperation and exchange with local stakeholders in function of care for the

environment. These spaces can be: an Environmental Panel, Citizens' panel, Local Development Committee, among others.

- Promote the delivery of information to the stakeholders regarding the company's operations, managing its impacts and contributions to the local community; for example through Field Visits Plans, Information Campaigns; Open Doors Day.

8.9 Risks associated to the Transportation of Sulphuric Acid.

Associated Actions

- There are safety procedures for transportation companies that are more stringent than the Chilean standard.
- There are procedures to act in case of highway emergencies.
- There is a transportation company qualification matrix.
- Initiatives as the following ones have been implemented: Hazardous substances handling workshops, lectures and drills with own personnel and staff from related institutions (hospitals, police, fire departments, Municipality).
- Drills: they are executed on a periodical basis.
- In addition, various collaboration initiatives have been carried out with institutions related to the community's safety and health, such as:
    - ✓ Contribution of US$ 15,000 to Fire Department in equipment.
    - ✓ Formal training to Fire Departments, Police and Catemu and Llay Llay SAMU.
    - ✓ Drills with Fire Departments, Police, Transportation Companies and the company.
    - ✓ Emphasis on prevention. A safe tank truck was designed to ensure minimum damages in case the truck overturns.
    - ✓ Emergency management manual.

Recommended Actions

- Ensuring that transportation companies are accredited with a qualified organization.
- Whenever possible, creating an incident recording system for transportation companies to allow rating them.
- Keeping an ongoing Training Program for transportation companies that implies creating awareness about complaints from the community and on-route supervision.
- Holding regular workshops and lectures on hazardous substances handling and related practices.

8.10 Impacts on road deterioration and congestion due to the increasing heavy truck traffic.

Associated Actions

- A transportation schedule that prevents going through populated areas and congestion hours has been implemented.

Recommended Actions

- Evaluating the impact in congestion and deterioration of roads produced by truck traffic. Creating appropriate management measures.

8.11 Crop rotation in lands that belong to the company and its impact in labour.

Associated Actions

- From the agricultural production viewpoint, the Smelter has become a relevant stakeholder in its surroundings (Sta. Margarita, San José) with its 150 hectares of farm production land, creating seasonal jobs to manage the crops. During the last years, both due to administrative reasons and due to the support to the goat project, a crop rotation was made (from vegetables to alfalfa), drastically reducing the workers' demand.

Recommended Actions

- As in point 3.4, it is recommended to support the existing technology transfer programs executed by INDAP and PRODESAL to promote crop management improvement amongst local farmers. It is recommended to explore the potential of organic agriculture.

9 Indicators and Monitoring (E1 and E2 Tools)

Some of the outcomes of the assessment process can be used as performance indicators to make follow-ups and monitoring. As this assessment is being executed for the 5 Anglo American Divisions in Chile, it will be possible to have a comparative and global perspective with the potential effects on the social corporate management.

9.1 Corporate Key Performance Indicators.

Indicators	Total value US$ per annum	Beneficiaries (number)	
		Division's employees	Other Stakeholders
(a) Added value generated by the Division	**32,933,073**		
(b) Taxes and others paid by the Division	**4,418,424**		
(c) Direct jobs in the division	**7,845,290**	**287**	
(d) Indirect jobs with contractors, suppliers and induced employment			**270**
(e) Expenditure in social and community programs	**173.250**		**n/a**
(f) Jobs through social investment			**n/a**
(g) Basic health services beneficiaries	**n/a**	**n/a**	**n/a**
(h) Beneficiaries that have received education and training provided or subsidized by the company	**73.096**	**217**	**52**
(j) Capital expenditure	**1.400.000**		
(k) Total amount of people depending on the Division to earn their living		**827**	**778**
(l) Pension payments	**n/a**	**n/a**	**n/a**

9.2 Local Key Performance Indicators.

Other local key performance indicators defined for Chagres Division that are recommended to be measured in the future are the following:

Other recommended local indicators

Indicators
(m) Net exports
(n) Direct and indirect employees' benefits
(ñ) Number of beneficiaries in Social Programs
(o) Number of local suppliers
(p) % of the Division's budget executed within the area of influence. Attempts to know the aggregate performance and to evaluate the impact of the policies.
(q) % of own municipal income that comes from the Division (payment of patents, traffic permits, cleaning duties, building permits, among others).
(r) Amount of own municipal income that comes from the Division (payment of patents, traffic permits, cleaning duties, building permits, among others).
Other indicators that are recommended for the follow-up of investment projects that impact the level of incomes and job possibilities of the beneficiaries and that measure the progress compared to the base line are: ✓ % of persons employed, % of persons working in jobs related with training; % of persons working in other activities. ✓ Improvement in the level of incomes compared to the baseline in productive business projects (delta of the incomes attributed to the projects).