

accurate mapping to be made and for the identification of resources to be compiled in at least the fields of minerals, hydrocarbons, forestry, hydrology and the identification of areas of agricultural concentration, potential land use, etc.

143. In order to take advantage of this possibility, and besides the investment which the Government will be making in this programme, UNDP has been asked to make a contribution of \$150,000 (\$100,000 in 1973 and \$50,000 in 1974) to assist GEOBOL (Servicio Geológico de Bolivia) the counterpart agency, in securing high level technicians to assist in the interpretation of the photographs for the various sectors mentioned above and to train Bolivian technicians in photo-interpretation. The necessary equipment to carry out this scientific endeavor will also be provided. The Government's contribution to the programme in 1973 and 1974 will be \$ 2,624,000 (pesos bolivianos).

Radioactive Minerals Prospection IAEA

144. Early in 1971 an IAEA/UNDP project made positive findings of uranium in Bolivia. Given the needs of the country to diversify its production, the Government is requesting further aid and in this field consisting of one geologist for six months and equipment (a drilling rig, vehicles, etc.) at a total cost to UNDP of US\$ 39,000. The project will start and end in 1973. The counterpart contribution will be 873,000 pesos.

Mining and Metallurgic sector

Other assistance

145. The mining and metallurgical sector has benefited above all from two very large international credits. The first, called the Triangular Plan, between the Federal Republic of Germany, the BID, and USAID, consisted of a 45 million dollars credit plus technical assistance for COMIBOL to streamline its operations and improve its capital equipment. Besides this, the Federal Republic and USAID gave credits to the Banco Industrial of 1.5 million and 2.3 million dollars respectively. More recently the USSR has authorized a credit of 27.5 million dollars for the years 1970-73; this includes the supply of Russian machinery and equipment to Bolivia. Above all, in the mining field Russian experts are at present doing a pre-feasibility study for the construction of a zinc plant and a horno de volatilización in Potosí. Much of the

other assistance has consisted of equipment credits for mineral treatment, mainly from eastern European countries.

146. In 1972 the British Government provided a 2.4 million dollar credit for COMIBOL for the acquisition of British mining equipment.

147. The Japanese Government, between 1969 and 1971, provided GEOBOL (Servicio Geológico de Bolivia) with two experts, one to work on the testing of samples and the other to assist in the installation of an X-ray spectrometer which had just been supplied to GEOBOL.

148. Finally, the German Government has given 7.2 million dollars credit to build the first phase of a tin smelter in Vinto (near Oruro).

Project reserve

149. As it stands now, Bolivia's known mineral reserves will be exhausted within the next five years. Thus, massive amounts of capital will be needed to explore new regions of the country in search of mineral reserves. While the Government seeks to obtain funds from other sources to tackle this problem, the authorities request US\$ 1,500,000 from UNDP in order to start a mineral prospection project lasting three years. The project will get underway as soon as funds become available. Other details will be determined. It should be mentioned that if UNDP's involvement in this critical situation is minimal, it is seen by the authorities as important since it is hoped that UNDP will act as a catalyst in order to attract larger sources of funds.

Development of Natural Resources

150. The Government requests that UNDP allocate US\$ 1,500,000 to help in various projects to develop the natural resources of Bolivia; project details will be discussed when the likelihood of additional financing becomes a closer reality.

NATURAL RESOURCES

Hydrocarbons

Background

151. Since the nationalization of the Bolivian Gulf Oil Co. in October 1969, the State Petroleum Co. (Yacimientos Petrolíferos Fiscales Bolivianos, YPFB) has had a total monopoly of the exploration, exploitation, refining, transport and commercialization of hydrocarbon products and its derivatives. The nationalization of the Gulf Oil Co. and the attendant indemnization payments have had the effect of reducing funds that might have gone into capital investment. During 1965-71 period, the production of this sector increased by more than 300%, going from 533,156 cubic metres to 2,137,800 cubic metres.

152. The exports of the hydrocarbons sector represented in 1971 11.8% of total exports, with a value of US\$ 24,000,000. Of these, approximately US\$ 12,000,000 were exported through the Pacific Coast and about US\$ 11,800,000 were exported to Argentina. Still various hydrocarbon products are being imported, such as aviation fuels, asphalts and lubricant bases for a yearly value of US\$ 1,500,000 approximately.

153. The actual refining capacity of YPFB is about 23,700 barrels a day distributed in seven refineries. The main ones are in Cochabamba (14,000 barrels), Sucre (4,000 barrels) and Santa Cruz (3,000 barrels).

154. The main products obtained by the distillation of crude oil are: gasoline, representing about 44%, kerosene 17%, diesel oil 13%, fuel oil 20% and lubricants 2.5%. During the 1965-71 period, hydrocarbons contributed 245,000,000 pesos to the GNP in the first year and 636,000,000 pesos in the latter year. This represents a sectorial participation in the GNP of 3% in 1965 and 5.4% in 1971.

Main difficulties encountered in the hydrocarbons sector

155. The main obstacles to remove are:

1. Institutional, which revolve mainly around the needed modernization of YPFB in order to obtain higher rates of productivity.

In order to reach this, better financial and personnel management

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will be needed. At the same time, better coordination will have to be maintained with the public institutions in charge of formulating the policy of the hydrocarbons sector, such as the Ministry of Energy and Hydrocarbons;

2. Its exploratory capacity is adversely affected by the financial condition of the company. This is basically due to the inability of the company to obtain sufficient external financing;
3. Obsolete equipment. The exploratory needs of the company are affected by obsolete equipment which is not being renewed, again due to the financial situation of the company. At the international level, the company has not been able to obtain financing for equipment, although some technical assistance has been obtained;
4. High employment. YPFB employs many people who are not directly related to productivity nor to the relationship between technicians and workers. An administrative and technical rationalization of the company will also have to be accompanied by the rationalization of the labour force;
5. Legislative and institutional aspects will have to be made compatible with the monopolistic situation in the hydrocarbons sector. The Government will need to simplify and rationalize this institutional situation. Equally, the Government will have to establish incentives for investment in projects within this sector.

Development policies for the hydrocarbons sector

156. The following are necessary features in the establishment of a national hydrocarbons policy:

1. To refine hydrocarbons with more advanced technologies and to supply the increasing internal demand with products of high quality;
2. To encourage exploration and exploitation of new reserves. This would include the intensification of exploratory activities in the Sub-Andean region and in the Chaco-Beni and to give priority to certain geological structures in the Altiplano;
3. To industrialize by introducing more modern technologies into the hydrocarbons sector and its derivatives and to harmonize this

with basic chemical industry in the country, keeping always in mind the possibilities offered by the Sub-Andean region;

4. To supply the national market with cheap industrial energy through the availability of natural gas, to rationalize the exports of petroleum and gas always keeping a rational relationship between reserves and production; to relate YPFB financially with foreign state companies in order to carry out multinational projects; to improve the institutional situation of YPFB; to improve the productivity of the employees of YPFB through specialized training of the labour force thus reducing the unjustified increment in the number of personnel.

UNDP assistance - ongoing and/or approved projects - Hydrocarbons

Centre for Petroleum Development BOL/65/510 UNOTC

157. This project was started in 1966 with an original three-year UNDP contribution of US\$ 944,900. Through various amendments, the project will be continued through 1973 with a total UNDP contribution of US\$ 1,216,793. The Government contribution will have increased to US\$ 1,765,000. The main objective of this project is to help YPFB increase its production through the demonstration of the latest technology in the exploration and research of petroleum and gas. The main UNDP expenditures were for experts (US\$ 252,389), subcontracts (473,745) and equipment (399,079). For continued assistance to the Centre, US\$ 145,000 are earmarked for 1972 and US\$ 102,000 for 1973, mainly for experts (128,000), consultants (23,817), fellowships (26,900) and equipment (64,900). Activities should come to an end in December 1973 although an extension is foreseen. The Government contribution is 23,600,000 pesos.

New Projects

Centre for Petroleum Development

158. As an extension of this project, the Government requests that UNDP maintains the presence of the centre in order that the newest and latest techniques are introduced through experts and/or consultants. For this purpose, US\$ 30,000 are being requested between 1974-75. The fact that Bolivia is at this very moment starting exploration in new areas of the country, principally on the

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Altiplano, justifies this assistance. The Government's contribution for the entire 1972-75 period will be in the order of 26,000,000 pesos.

159. Since no mention was made about ^{ground}water development, we take this opportunity to do so:

Groundwater development takes place mainly in the Cochabamba and Santa Cruz areas for municipal purposes. In the Altiplano, there exist plans for use of groundwater for irrigation purposes as well as in the Cochabamba and Santa Cruz areas. However, it should be mentioned that the potential for groundwater development is probably better in the Santa Cruz region because of higher rainfall and because of recharge from various streamings from the Cordillera.

HUMAN RESOURCES

Health Sector

Background

160. The indicators universally accepted to establish the health situation of a particular country or group show that in Bolivia this situation is markedly deficient. Annually, 16 persons per thousand die, half of which are children under 5 years of age. Of every six children born, one dies before the age of one. Analyzing the causes of death, one realizes that 80% of these deaths are due to diseases for which cure and prevention are medically known and even more, some of them can be totally eliminated, such as yellow fever and typhus. Through these figures, it is easy to see factors which affect negatively the development of the country such as a low labour productivity and absentism due to sickness; poor use of income devoted to medicines and a markedly unbalanced proportion of money spent on prevention as against treatment of sick people.

161. Considering the serious health problems of the country and the potential demand for medical and sanitation services, these resources actually available are totally insufficient. There are only three medical hours daily and two beds available for every one thousand inhabitants. 90% of the hospitalization resources available are found in urban areas, with more than one thousand inhabitants while the rural areas are, for the most part, totally uncared for.

162. Four factors influence the health conditions of the country. In the first place, the age factor of the population of Bolivia: 50% of the population is under 20 years of age, which represents a high proportion of the population highly susceptible to parasitic and infectious diseases. Two thirds of the population are dispersed or in small nuclei in the rural areas of the country without adequate means of communications which makes it impossible for them to have access to provide adequate medical services. The second factor is the low nutritional level of the population. Studies for Bolivia indicate that two thirds of children under 15 years of age suffer from malnutrition. The most important cause for this malnutrition is the low intake of calories and animal proteins. The

third factor is the hostile, contaminated and infected living conditions which constitute a constant risk to health. In Bolivia, only 8% of the localities have drinking water systems; less than 2% of the localities have a system for the elimination of human waste. A great percentage of the population live in housing considered unhealthy. Other factors are the contaminated foods as well as the low income levels which make it impossible for most of the population to have the necessary means for prevention or treatment of disease, and to overcome the extremely poor condition of sanitation.

Objectives

163. The main objectives within this sector are to increase the health levels of the population and consequently to increase the average life expectancy; to make accessible to the marginal population the beneficial aspects of health, to expand the social security structure in favour of the campesinos; to incorporate the general realm of health protection to the needy sectors of the population.

To achieve these objectives, the following actions should be taken:

1. To establish and coordinate the health objectives;
2. To gather data regarding the vulnerable sectors of the population;
3. To eradicate and control malaria, exantematic typhoid, yellow fever, smallpox and rabies;
4. To reduce TB, venereal diseases, diphtheria, haemorrhagic fever, tetanus, poliomyelitis, lepra, chagas, respiratory and parasitic diseases and infections;
5. To improve and amplify the capacities of hospitals and rehabilitation centres. To provide for more water systems and letrines as well as waste elimination systems. Also to increase the nutritional level of the population through programmes of nutritional recuperation, nutritional education and clinical studies. And, finally, to improve the medical attention available by improving the training of the personnel involved, giving it better equipment and by making it possible for it to extend its services to rural areas.

UNDP assistance - Ongoing and/or approved projects - Health

Epidemiology BOL/68/019 WHO

164. This project was approved in 1969 and consists of one expert to assist the authorities in the establishment of methods that will help control the principal infectious diseases. US\$ 60,000 are programmed for the 1972-74 period which covers the services of an epidemiologist for 24 months. The Government's contribution will be 1,347,000 pesos. The project should end in April 1974.

Health Statistics BOL/69/001 WHO

165. The assistance of one health statistician to advise the authorities in the field of statistics will be continued in 1972 and 1973. US\$ 60,658 are programmed under the IPF respectively mainly for one expert during this period. The Government counterpart contribution will be 1,334,000 pesos. The Government is very much interested in having this project continued under the auspices of the United Nations Fund for Population Activities (UNFPA).

Integrated Health Services BOL/68/017 WHO

166. One sanitary engineer to advise on the installations of letrines, sewers, waste treatment plants and drinking water supplies will be continued under the IPF between 1972 and 1973. For this period US\$ 41,000 are programmed which cover basically the services of the sanitary engineer. The Government counterpart contribution is 5,970,000 pesos.

Occupational Health BOL/69/010 WHO

167. This project, aimed at aiding the authorities in controlling and reducing occupational diseases in the mines and factories, was approved in 1970. Since that time, however, the Executing Agency has been unable to fully implement this project. For 1972 and 1973 US\$ 172,000 have been allocated within this project, mainly for experts, US\$ 110,000, fellowships US\$ 20,000, and equipment US\$ 42,000. The future of this project was being discussed at the time of writing of this document. The Government contribution will be 9,482,000 pesos.

New Projects

168. None.

Other assistance

169. It is worth pointing out in relation to the lack of new UNDP-backed projects in the health sector, that the latter is relatively well covered both by the other UN agencies working in that field and by bilateral agencies. For instance, WHO which has a large number of regular programmes in Bolivia, is at present working on the elimination of smallpox, the control of tuberculosis, control of rabies, the control of typhus, environmental health, water supply, nutrition, medical and nursing training, sanitary engineering, veterinary medicine and dentistry.

170. UNICEF has also been working with the Bolivian Government in national development plans since the 1950s. The first stage, UNICEF worked above all in school nutrition programmes and on malaria eradication programmes. Since 1957 and until 1972, UNICEF worked with the Ministry of Health on the development of extension services for the improvement of the rural public health services on a national scale. Like WHO, UNICEF collaborated with the Government from 1960 to 1966 in the fields of health, personnel training, environmental health, social services and with the national rural development plan through the three centres for this programme: Pillapi, Playa Verde and Otavi; thus, in conjunction, both WHO and UNICEF programmes are worth close to 1 million dollars a year for Bolivia alone. To this, one should add the assistance being provided by the Argentine Government through an 8 million dollar programme for a sanitary plan on the Bolivian border with Argentina. This programme consists of the elimination of endemic diseases such as Chagas, goitre and malaria. However, 30% of this sum will be used for the construction of clinics and the acquisition of medical equipment.

171. USAID is also working in the schools nutrition field and between 1967 and 1972 provided US\$ 82,000 for the drawing up of a schools' nutrition plan, which would provide for balanced meals and nutritional education for some 352,400 students per school year. This has worked in coordination with Food for Peace, which has since distributed some 9.5 million dollars worth of food products.

HUMAN RESOURCES

Education and Cooperatives

Background

172. It is estimated that approximately 30,000 students a year are incorporated into the student population. Yet 55% of the population between six and nineteen years does not receive schooling and the drop-out rate is alarming. Also, particularly alarming is the low level of student retention of the elementary rural schools which is about 5.4%. Equally low are the retention levels of elementary and middle level schools in the urban areas. It has been calculated that only one of every four students finishes his studies. One unfortunate result of this situation is the high illiteracy rate which is about 63%.

173. Other serious problems of the educational sector are the great number of institutions in charge of administering educational services. In Bolivia, educational services are exercised by various institutions: the Ministry of Education, COMIBOL, YPFB and private entities. Equally, some twelve other State institutions maintain educational programmes. Added to this is the extreme centralization of decision-making, thus making the educational problem more and more acute with the passing of time due to the lack of adequate planning and permanent coordination.

174. Some of the basic national objectives as regards education are as follows:

- a) To restructure and integrate the various educational services;
- b) To expand the educational services at the very basic levels in favour of rural and urban areas;
- c) To amplify and diversify education at the middle levels and at the professional levels. It should be tightly linked to the formation of middle-level technicians needed for the development process of the country, placing emphasis on technical, industrial and agricultural training;
- d) To rationalize the use of human, physical and financial resources available to the educational services;
- e) To eliminate the educational deficit;
- f) To diminish the rate of illiteracy; and finally

- g) To improve the general quality of education by improving educational concepts, the techniques of teaching and by improving the quality of the teaching staff.

UNDP assistance - Ongoing and/or approved projects - Education and cooperatives

Educational Planning BOL/68/015 UNESCO

175. The expert in Educational Planning arrived here in 1971. His main activities since that time have centred around an analysis of the educational system and also in helping the authorities draft a study for the diagnosis of Bolivia's educational system. For 1972 and 1973, US\$ 40,000 have been approved mainly to cover the services of the expert. The expert is working with the Educational Planning Division of the Ministry of Education. The counterpart contribution is approximately 11,753,000 pesos mainly to cover the salaries of people on the educational planning division of the Ministry. It should be mentioned that a new educational law has just been approved for Bolivia. The Ministry of Planning will consider requesting more amounts of money within this sector pending the outcome of the execution of the newly-approved law.

176. In the area of education, it should be mentioned that Bolivia is a participant of the Regional Project 223. A joint UNESCO/ITU mission recently spent two weeks in Bolivia gathering data and was most optimistic about the possibilities of the country in the field of teleducation.

Scientific Documentation Centre BOL/68/013 UNESCO

177. One expert is programmed for 1972-73 to assist the Documentation Centre train personnel and advise on the latest documentation techniques. The expert will also aid other institutions tackle their documentation problems. Total UNDP contribution for 1972-73 is US\$ 30,000 to cover the services of the expert. Counterpart contribution will be 404,000 pesos.

Supervised Credit to Rural Cooperatives BOL/68/004 ILO

178. The Government requests that the services of an expert in cooperatives who came in early 1972 be continued until March 1973. His main activities center around helping rural cooperatives set up efficient credit schemes. The UNDP contribution for 1972-73 is US\$ 30,000. The Government counterpart contribution is 777,000 pesos.

New Projects

Educational Planning

179. As an extension of this project, the Government is requesting that the post of expert in educational planning be continued through December 1976. Total UNDP contribution for 1973 through December 1976 as such being requested is US\$ 110,000. The Government has not specified the activities that they want the expert to carry out between 1973-76.

Scientific Documentation Centre

180. As a continuation of this project, the Government is requesting that the expert in Scientific Documentation be programmed through December 1973 at a total cost to UNDP of US\$ 7,500. The expert would work with the Scientific Documentation Centre and would also assist other public institutions to devise solutions to their documentation problems.

Cooperative Policy and Development

181. Background: The cooperative movement is characterized by the lack of organization, coordination and its general diffusion. Nevertheless, the cooperative movement is a positive instrument in the social and economic development of small income groups and for those living on marginal earnings. As such, the development of the cooperative movement must be seen from its associative, economic and functional points of view.

182. The objectives of the Government in this sector are:

- a) Promote the cooperative movement seeking its integration, autonomy and efficiency;
- b) Promote the training of cooperative personnel at all levels;
- c) Promote the development of cooperatives that will follow the modern principles of training, organization and overall functioning; and
- d) Systematize cooperative education.

Priorities:

- To establish the "Instituto Nacional de Cooperativismo", which will promote the unity, association and organization of consumer cooperatives;

- To organize cooperatives by branches of economic activity, by objectives, by goods and services, and by geographic regions;
- To revise the legislation of cooperatives;
- To establish a system whereby university graduates would serve one year in production cooperatives; and
- To develop rural cooperatives in the following areas of activity: forestry, cattle, fish and game, agriculture.

183. The legal instrument to execute and accomplish the above will be the General Cooperative Law. The financial means will be sought from public, private, foreign and national bodies. The agency for cooperative development will be the National Cooperative Institute designed to promote, educate, advise and fiscalize cooperative activities.

184. Towards these ends, the Government is requesting an expert for 1974 and 1975. He may also be asked to assist in the channeling of a proposed IDB loan to give financial assistance to rural cooperatives. The UNDP contribution would be US\$ 60,000.

Other assistance

185. As in the case of the health sector, the educational sector is one of the areas in which the Bolivian Government is very confident of being able to find multilateral and bilateral assistance other than that provided by UNDP-backed projects. Mention of a few will suffice.

186. For a long period, UNICEF has collaborated with the Government in this field, above all in the training of primary school teachers for rural and urban areas. UNICEF, in collaboration with UNESCO, helped the Government create the Instituto Superior de Educación Rural (ISER) which has given the Government a possibility of having a permanent preparation and training centre for rural teachers. This rural normal school programme has been backed by WFP-assistance in the field of nutrition which has consisted of providing additional food products for rural normal schools. Since the start of this project in 1971, approximately 1 million dollars worth of food has been provided to the Bolivian Government for this purpose.

187. USAID between 1967 and 1972 provided approximately 1 million dollars, both for the improvement of school text books and the curriculum services within the Ministry of Education as well as to improve the library services in universities and normal schools.

188. The Bank for Interamerican Development is providing 2.3 million dollars worth of loan and technical assistance for the universities of Santa Cruz, Cochabamba and Oruro in order to improve teaching and research facilities. These include the construction of lecture rooms with modern equipment and increase in the number of teaching personnel and assistance to administrative personnel.

189. Similarly, the OAS is providing the universities with a number of teachers in highly specialized fields.

190. One should mention finally that almost all countries with diplomatic representation in Bolivia provide a number of post-graduate fellowships in their respective countries, above all for technical training. The number of these probably reaches 250 per annum. The same countries also provide teaching equipment and teachers themselves on a short-time basis for Bolivian technical training schools and schools in general.

INDUSTRY

Background

191. During the 1965-71 period, the industrial sector contributed an average of 11.8% of the GNP (NOT including hydrocarbons). The participation of the foodstuff industry in the same period was approximately 23.4% in the average and of the non-foodstuffs about 76.6%. During this same period, the cumulative annual growth rate of the industrial sector was 5.5% while the economy in general grew by 6.2%.
192. The structure of industrial production reflects the national degree of under-development as it is based on the production of non-durable consumer goods (65%) and, on a lesser scale, in the production of intermediate goods (32%). The production of capital goods is minimal: 3%.
193. The industrial production presents the following composition: for the year 1970, non-durable consumer goods were mainly foodstuffs in the sugar and milling industry; intermediate goods were represented mainly by the textile industry which covered about 50% of intermediate goods produced, followed in importance by the chemical industry, the pharmaceutical industry and the production of non-metallic minerals. Capital and durable consumer goods are represented by the metal-mechanic industry, which is the only one of relative importance.
194. This structure, with the predominance of non-durable goods produced by industry, is due to the fact that small investment is required, the technology is quite simple and the labour cheap and non-specialized. The structure is also characterised by its external dependency for the importation of raw materials. Other aspects of this structure are low productivity, disguised unemployment, obsolete machinery. This is particularly seen in the textile industry which has machinery which is twenty to thirty years old.
195. In 1965, 137,000 persons were actively employed in the industrial sector. In 1971, this figure reached 163,000. In view of the population growth during this period, it is possible to see that the industrial sector was on the whole an important source of employment.
196. During 1971, the construction industry employed approximately 28,700 persons. The handicrafts and small arts, during the same year, employed about 144,000.

197. Some basic problems for the development of industry in Bolivia are to be found in its restricted market due to the low per capita income. In addition, one can also consider the negative distribution of income, the lack of integration between various regions of the country and the lack of integration found amongst the greater part of the population. That is to say that the rural population is hardly a part of the market economy.

Main policies related to industrial development

198. The most dynamic industrial activities will be chosen for their development, seeking an accommodation between the need to introduce capital-intensive technologies and the existing problem of unemployment. The main activities to be developed will be those that produce intermediate goods which in their turn will be able to give support to the development of other industrial activities. On the other hand, industry will be geared towards a larger market within the Andean region and the ALALC and therefore the existing industry will have to reconvert or to realign itself to take into account the probability of larger internal and external markets. Finally, new industries will be located throughout the country taking into account the different poles of development.

199. The long-range objectives for an industrialization policy for the country will be to double the present industrial occupation, to increase the participation of the sector to about 25% of the GNP and to increase three times the present industrial production. An important part of the industrialization programme will be financed directly through the public sector or through mixed companies. Yet, it is also hoped by definite incentive policies to attract foreign capital for those areas of industrial production which are not strictly reserved to the public sector.

UNDP assistance - Ongoing and/or approved projects

Experimental Production Plant for Asbestos Processing
BOL/68/520 UNIDO

200. This project became operational in February 1970 with an original contribution of US\$ 257,500 and a Government contribution of US\$ 238,200. The project was to be completed in two years but delays in project execution have delayed completion date until June 1973. The delays have also increased project costs considerably. The main objective of the project is to set up an experi-

mental asbestos beneficiation plant to produce materials which will supply the internal and external markets. This plant will provide the basis for several other asbestos-related industries, as well as develop the asbestos mining area of Cochabamba. The 1972-73 UNDP contribution is US\$ 668,000 mainly for experts (US\$ 60,000), subcontracts (US\$ 560,000), fellowships (US\$ 5,000), and equipment (US\$ 81,400). The Government's contribution for 1972-73 is in the order of 3,500,000 pesos mainly for personnel, 300,000 pesos; equipment, 1,340,000 pesos and items under the heading of various for a total of 1,700,000 pesos. The Government counterpart agency is the Corporación Boliviana de Fomento.

Ceramics Industry BOL/70/004/UNIDO

201. This project was completed in June 1972. The activities of the UNIDO expert were successfully carried out as he discovered various rich deposits of refractory materials. He also carried out various feasibility studies for a glass factory, /caolín factory, a tile plant and a sanitary furniture factory. Credits are being obtained to put these up. The UNDP contribution was US\$ 15,000 for 1972.

New Projects

Ceramics industry

202. As a continuation of the project mentioned in paragraph , the Government is requesting that another US\$ 30,000 be programmed for 1973-74 so that the same expert can be obtained to supervise the final installation and start-up of the tile plant being installed by a Czechek firm. The Government's contribution will be in the order of 1,000,000 pesos and the counterpart agency will be the Corporación Boliviana de Fomento.

Metal-Mechanics

203. One of the priorities assigned to Bolivia within the Andean Group is the manufacture of certain light engineering products.

204. To help Bolivia in future negotiations in this subsector as well as in acquiring the needed technical competence, the Government requests that expert and/or consultants be financed by UNDP to work with the various national entities concerned. For this, US\$ 90,000 are being requested for 1973 and 30,000 for 1974. The counterpart contribution will be 1,160,000 pesos.

Quality Standards - UNIDO

205. The Government requests UNDP to finance a programme between 1974 and 1976, aimed at assisting the Dirección de Normas y Tecnología of the Ministry of Industry and Commerce to improve its quality control programme. The project must be seen in terms of Bolivia's needs to strengthen its position vis-a-vis the regional markets which it cannot do without an effective quality control of all its products. The requested UNDP contribution is US\$ 184,800 mainly for experts and equipment. The Government's contribution will be 6,472,000 pesos.

Other assistance

206. The IDB has given considerable assistance to this sector. Firstly, a 2.1 million dollar loan between 1966 and 1972, in order to carry out pre-feasibility studies for industrial development. Secondly, that Bank contributed with a 10.8 million dollar loan to finance the programme of credits for the industrial sector (to include mining, tourism and handicrafts), for the years 1966-74. Also included in this assistance is the reorganization of the Corporación Boliviana de Fomento, the Bolivian Development Corporation.

Similarly, 2.5 million dollars were provided for the COMIBOL (State mining agency) for the acquisition of equipment and industrial machinery.

207. Finally, USAID provided 217,000 dollars between 1967-72 to establish a savings and credit cooperative which would provide investment for industry or for agro-industrial projects.

PROJECT CONTROL, PLANNING AND SUPPORT

New Project

208. The difficult budgetary situation of the country has had, in the past, negative effects on the conduct of projects, as documented in the description of technical assistance in the Background Document. On different occasions, national and international funds, time and equipment have been wasted precisely because of the difficulties encountered by counterpart agencies in making timely contributions of their acquired commitments. There have also been instances of useful and needed projects that have had to be cancelled because of the same reasons.

209. In order to avoid difficulties and waste of resources in the future, the Government of Bolivia has suggested the creation of a fund of US\$ 216,000 out of the IPF, to be used during the 1972-76 programming period, to help overcome obstacles and ensure the smooth operation of UNDP-assisted projects.

While the money would be used to face emergencies met at given times by one or another national counterpart agency, it will only be used in extreme cases when other efforts have failed to produce on time the needed counterpart financial resources. In all cases, it will be used after consultation and with the approval of UNDP Headquarters. In the full expectation that the Government's financial situation will be improving in the immediate years, this fund is phased to be used on a decreasing basis.

PRELIMINARY LIST OF PROJECTS
WITH
ESTIMATED GOVERNMENT AND UNDP INPUTS IN
FINANCIAL TERMS FOR THE PERIOD 1972-1976

ESTIMATED TOTAL GOVERNMENT FINANCIAL INPUT: \$b. 144,223,000 IPF: US\$ 15,000,000
(in local currency units)

Estimated Government Inputs in thousands of						Estimated UNDP Inputs in thousands of US\$					Total
1972	1973	1974	1975	1976	Total	1972	1973	1974	1975	1976	72-76
<u>Sector: INFRASTRUCTURE</u>											
<u>A. Ongoing/approved projects</u>											
41					41	1. Railways - BOL/71/525	529	22			551
36	9				45	2. Cost Accounting BOL/70/008	30	13			43
415	415				830	3. Civil Aviation BOL/68/020	42	36			78
336					336	4. Telecommunications BOL/68/021	67				67
5	1125	217	161		1508	5. Telecommunications Training Centre BOL/71/518	5	322	266	132	725
336	336				672	6. Energy Programmer BOL/70/006	30	30			60
21					21	7. Energy Resources BOL/71/532	1				1
2011	3014	3464			8489	8. Meteorology BOL/70/526	285	250	34		569
	256				256	9. Rationalization of Foreign Trade BOL/72/011		27	6		33

ANNEX I (contd.)

Estimated Government Inputs in Thousands of Bolivian Pesos						Activities by Sector	Estimated UNDP Inputs in thousands of US\$					
1972	1973	1974	1975	1976	Total 72-76		1972	1973	1974	1975	1976	Total 72-76
						<u>Sector: INFRASTRUCTURE</u>						
						<u>A. Ongoing/approved projects</u>						
						10. Cartagena Agreement BOL/71/007	25					25
						11. Basic Statistics BOL/68/ 001	8					8
1660	2300				3960	12. Administrative Reform BOL/69/008	78	90				168
	550				550	13. Regional Planning BOL/ 71/010	13	22				35
						14. Development Planning BOL/72/001	3					3
4861	8005	3681	161		16708	INFRASTRUCTURE TOTAL "A"	1116	812	306	132		2366
						<u>B. New Projects</u>						
259	836	257			1352	1. Railways BOL/72/002	150	694	146			990
						2. Civil Aviation BOL/68/028			40	40	40	120
						3. Rationalization of Foreign Trade BOL/72/011		8	87	87	87	269
						4. Cartagena Agreement BOL/ 71/007		25				25
						5. Regional Planning BOL/71/ 010		23	165	305	150	643
						6. Inventory Energetic Resour- ces BOL/71/532		34	379	208		621
						7. Administrative Reform BOL/ 69/008			45			45
						8. Transport Coordination Unit		30	30			60
259	1348	1787	1148	558	5100	INFRASTRUCTURE TOTAL "B"	150	814		640	277	2773

Estimated Government Inputs in thousands of Bolivian Pesos						Estimated UNDP Inputs in thousands of US\$					
1972	1973	1974	1975	1976	Total 72-76	Activities by Sector					
1972	1973	1974	1975	1976	Total 72-76	1972	1973	1974	1975	1976	Total 72-76
						<u>Sector: AGRICULTURE</u>					
						<u>A. Ongoing/Approved projects</u>					
						1. Agro-Industrial Development in the Abapo-Izozog region BOL/69/516					
4681	7991	3783			16455	488	1125	569	200	200	2582
						2. Animal Health BOL/68/519					
1055	2301	192			3548	220					220
						3. Animal Health BOL/72/007					
						57	181	30			268
						4. Improvement Agricultural Production, Altiplano BOL/68/521					
	549				549	466	173				639
5736	10841	3975			20552	AGRICULTURE TOTAL "A"					
						1231	1479	599	200	200	3709
						<u>B. New Projects</u>					
						1. Animal Health BOL/72/012					
		3790	3437	3536	10773			281	225	177	683
						2. Agro-Industrial Development, Abapo-Izozog region BOL/69/516					
								100	300	100	500
		3790	3437	3536	10773	AGRICULTURE TOTAL "B"					
								381	525	277	1183

ANNEX I (contd.)

Estimated Government Inputs in thousands of Bolivian Pesos						Estimated UNDP Inputs in thousands of US\$						
1972	1973	1974	1975	1976	Total 72-76	Activities by Sector	1972	1973	1974	1975	1976	Total 72-76
						Sector: <u>NATURAL RESOURCES</u>						
						A. <u>Ongoing/approved projects</u>						
3561	1775				5336	1. Groundwater Development in the Altiplano BOL/68/514	350	170				520
5340					5340	2. Survey of the Mutun Iron Ores & Manganese Deposits BOL/70/527	221	123				344
336	561				897	3. Mining & Metallurgical Research Inst., Oruro BOL/70/015	32	16				48
70	140				210	4. Market Study for Bismuth & Antimony BOL/72/010	7	7				14
336					336	5. Study of Smelting Plants BOL/73/001		1				1
5741	17857				23598	6. Mineralogy BOL/71/002	5					5
15384	20333				35717	7. Centre for Petroleum Devel- opment BOL/65/510	145	102				247
						NATURAL RESOURCES TOTAL "A"	760	419				1179
						B. <u>New Projects</u>						
	561	561	561	561	2244	1. Mining & Metallurgical Research Inst., BOL/70.015		38	30	30	30	128
4448	3124	998			8570	2. Hydrologic Study, Cochabamba	394	17				411
561	617	617	617		2412	3. Assistance to the Mining Industry	30	40	40	40		150
416	208				624	4. Natural resources Inventory	100	50				150
1457					1457	5. Radioactive minerals pros- pection		39				39
		1181	1229		2410	6. Centre for Petroleum Develop- ment BOL/71/510			15	15		30
7443	5691	3405	1178		17717	NATURAL RESOURCES TOTAL "B"	601			85	70	908

ANNEX I (contd.)

Estimated Government Inputs in Thousands of Bolivian Pesos						Estimated UNDP Inputs in thousands of US\$						
1972	1973	1974	1975	1976	Total 72-76	Activities by Sector	1972	1973	1974	1975	1976	Total 72-76
						Sector: <u>INDUSTRY</u>						
						A. <u>Ongoing/approved projects</u>						
336					336	1. Ceramics BOL/70/004	15					15
2800	700				3500	2. Experimental Plant for As- bestos Processing BOL/68/ 520	625	43				668
3136	700				3836	INDUSTRY TOTAL "A"	640	43				683
						B. <u>New Projects</u>						
	885	970			1855	1. Ceramics		15	15			30
						2. Metal-Mechanics		90	30			120
		328	400	170	898	3. Quality Control			73	97	15	185
	885	1298	400	170	2753	INDUSTRY TOTAL "B"		105	118	97	15	335
Estimated Government Inputs in thousands of Bolivian Pesos						Estimated UNDP Inputs in thousands of US\$						
1972	1973	1974	1975	1976	Total 72-76	Activities by Sector	1972	1973	1974	1975	1976	Total 72-76
						Sector: <u>Project Control</u>						
						Project Control, Planning, and Support		70	55	46	45	216

Estimated Government Inputs in thousands of Bolivian Pesos						Estimated UNDP Inputs in thousands of US\$						
1972	1973	1974	1975	1976	Total 72-76	Activity by Sector						
						1972	1973	1974	1975	1976	Total 72-76	
						<u>Sector: HUMAN RESOURCES</u>						
						<u>A. Ongoing/approved projects</u>						
449	449	449			1347	1. Epidemiology BOL/68/019	22	30	8		60	
667	667				1334	2. Health Statistics BOL/69/001	41	20			61	
7755	1727				9482	3. Occupational Health BOL/69/010	20	152			172	
2985	2985				5970	4. Integrated Health Services BOL/68/017	36	5			41	
5786	5967				11753	5. Educational Planning BOL/68/015	30	10			40	
202	202				404	6. Scientific Documentation BOL/68/013	8	22			30	
407	370				777	7. Cooperatives BOL/68/004	23	7			30	
18251	12367	449			31067	HUMAN RESOURCES TOTAL "A"	180	246	8		434	
						<u>B. New Projects</u>						
Data not available.						1. Educational Planning BOL/68/015		20	30	30	30	110
						2. Scientific Documentation BOL/68/013		8				8
						3. Cooperative Policy			30	30		60
						HUMAN RESOURCES TOTAL "B"	28	60	60	30	178	

ANNEX I (contd.)

Estimated Government Inputs in thousands of Bolivian pesos						SUMMARY OF ALL SECTORS	Estimated UNDP Inputs in thousands of US\$					
1972	1973	1974	1975	1976	Total 72-76		1972	1973	1974	1975	1976	Total 72-76
47368	52246	8105	161		107880	TOTAL "A"	3927	2989	913	332	200	8361
259	9676	12566	8390	5452	36343	TOTAL "B"	150	1618	1658	1453	714	5593
						Unprogrammed Reserve		446	200	200	200	1046
47627	61922	20671	8551	5452	144223	GRAND TOTAL	4077	5053	2771	1985	1114	15000

ANNEX II

PRELIMINARY LIST OF PROJECTS WITH TENTATIVE TIMETABLE FOR
PROJECT FORMULATION AND IMPLEMENTATION

(XXX - Tentative period for implementation; ---- Tentative period for formulation, appraisal, approval, Executing Agency and Government preparatory activities; oooo - execution phase of ongoing projects which will tie in with new projects).

B O L I V I A	1972	1973	1974	1975	1976	Remarks
	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	
<u>INFRASTRUCTURE</u>						
<u>A. Ongoing/approved projects</u>						
Assistance to Railways I	XXXXXXXXXXXXXXXX					
Civil Aviation	XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
Cost Accounting	XXXXXXXXXXXXXXXXXXXX					
Telecommunications	XXXXXXXXXXXX					
Energy Programmer	XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
Energy Resources Evaluation		X				
Meteorology and Hydrology	XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
Foreign Trade Rationalization		XXXXXXXXXX				
Cartagena Agreement	XXXXXXXXXXXX					
Telecommunications Training Centre	ooooo	ooooooo	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX		
Administrative Reform	XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
Basic Economic Statistics	XXX					
Regional Planning	XXXXXXXXXXXXXXXXXXXX					
Development Planning	X					
<u>B. New Projects</u>						
Assistance to Railways II	XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
Civil Aviation (extension)		ooo	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX		
Transport Coordination Unit		XXXXXXXXXXXX				
Energetic Resources (extension)		ooooooo	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX		
Foreign Trade Rationalization		ooooooo	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX		
Cartagena Agreement (extension)	ooo	XXXXXXXXXXXX				
Administrative Reform (extension)		oooooc	XXXXXXXXXXXX			
Regional Planning (extension)		ooooooo	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX		

ANNEX II (contd.)

B O L I V I A	1972	1973	1974	1975	1976	Remarks
	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	
<u>AGRICULTURE</u>						
A. <u>Ongoing/approved projects</u>						
Agro-Industrial Development in the Abapo-Izozog Region	XX	XX	XX	XX	XXXXXXXXXXXX	
Animal Health Programme	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX				
Improvement of Agricultural Production, Altiplano	XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
B. <u>New Projects</u>						
Animal Health BOL/72/012			oooooXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	
Agro-Industrial Development in the Abapo-Izozog Region			oooooXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		
<u>NATURAL RESOURCES</u>						
A. <u>Ongoing/approved projects</u>						
Groundwater Development, Altiplano	XXXXXXXXXXXXXXXXXXXX					
Mining & Metallurgical Research Inst., Oruro	XXXXXXXXXXXXXXXXXXXX					
Mineralogy	XX					
Market Study, Bismuth & Antimony		XXXXXX				
Study Smelting Plants		X				
Centre for Petroleum Development	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX				
B. <u>New Projects</u>						
Hydrologic Study, Cochabamba		oooooXXXXXXXXXXXXXXXXXXXX				
Mining & Metallurgical Research Inst., Oruro			XX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	
I.A. to Mining Industry			XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		
Natural Resources Inventory			XXXXXXXXXXXXXXXXXXXX			
Radioactive Minerals Prospection			XXXXXX XX			
Centre for Petroleum Development			oooooXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX		

ANNEX II (contd.)

B O L I V I A	1972	1973	1974	1975	1976	Remarks
	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	
<u>HUMAN RESOURCES</u>						
A. <u>Ongoing/approved projects</u>						
Epidemiology	XXXXXXXXXXXXXXXXXXXXXXX					
Health Statistics	XXXXXXXXXXXXXXXXXXXXXXX					
Integrated Health Services	XXXXXXXXXXXXXXXXXXXXXXX					
Occupational Health	XXXXXXXXXXXXXXXXXXXXXXX					
Educational Planning	XXXXXXXXXXXXXXXXXXXXXXX					
Scientific Documentation	XXXXXXXXXXXXXXXXXXXXXXX					
Supervised Credit to Rural Cooperatives	XXXXXXXXXXXXXXXXXXXXXXX					
B. <u>New Projects</u>						
Educational Planning		XXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXX	
Scientific Documentation		XXX				
Cooperative Policy			XXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXX		
<u>INDUSTRY</u>						
A. <u>Ongoing/approved projects</u>						
Experimental Plant for Asbestos Processing	XXXXXXXXXXXXXXXXXXXXXXX					
Ceramics	XXXXXX					
B. <u>New Projects</u>						
Metal-Mechanics		XXXXXXXXXXXXXXXXXXXXXXX				
Quality Standards		XXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXX			
Ceramics		XXXXXXXXXXXXXXXXXXXXXXX				
PROJECT CONTROL, PLANNING & SUPPORT			XXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXX	

Drafted: G. Bernard *[Signature]*

Cleared: Mr. Rapoport *[Signature]*

TE 311/1 BOLIVIA

RECORDS CONTROL
MAR 20 1973

14 March 1973

TO:

Mr. J. Barnea, Director
Resources and Transport Division

Mr. Tse-Chun Chang, Director
Public Administration Division

Mr. Robert Crooks, Director
Centre for Housing Building and Planning

Mr. Simon A. Goldberg, Director
Statistical Office

Mr. Guy Gresford, Director
Office of Science and Technology

Mr. George D. Howard Acting Director
Social Development Division

Mr. Leon Tabah, Director
Population Division

Mr. Simos Vassiliou, Assistant Director-in-Charge
Development Planning Advisory Services, CDPSP

Mrs. Carmen F. Korn, Chief
Human Resources Section
Europe, Latin America and Interregional Projects Branch, OTC

Mr. Jan van Heerden, Chief
Physical Resources Section
Europe Latin America and Interregional Projects Branch, OTC

FROM:

Bahgat El-Tawil, Acting Director
Office of Technical Co-operation *B. El-Tawil*

SUBJECT:

BOLIVIA - Country Programme - 1972-1976

....
Please find attached one copy of the final version of the
Country Programme as submitted by the Government of BOLIVIA for
consideration by the Governing Council in June 1973.

I should be very grateful if you would let me have your
comments as soon as possible particularly with a view towards a
timely implementation of those projects for which the UN will be
Executing Agency.