

PUBLIC

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**Peru**

**Physical and Institutional Development of the Universidad  
Nacional Agraria "La Molina"**

**TC007508057**

**PLAN OF OPERATIONS**

**July 1975**

PERU. TECHNICAL COOPERATION  
TO THE UNIVERSIDAD NACIONAL AGRARIA "LA MOLINA"

Preparation of a Physical and Institutional Development Project

I. REQUEST

- 1.01 Following the serious damage to the installations of the Universidad Nacional Agraria "La Molina" (UNA) caused by the October 3, 1974, earthquake, the rector of the University traveled to Washington and undertook negotiations with Bank authorities to have a mission go to Peru to make a preliminary assessment of the damage and to help UNA authorities present a technical cooperation request to the Bank for the preparation of a physical and institutional development project for the University. The Bank mission went to Lima on November 15, 1974.
- In a letter dated December 6, 1974, the Government of Peru requested, through the Director of International Technical and Financial Cooperation of the Ministry of Foreign Affairs, a technical cooperation operation with the Bank for the preparation of a physical and institutional development project for the aforementioned university.
- 1.02 This technical cooperation has been included in the Bank's plan of technical cooperation for Peru for 1975.
- 1.03 Based on analysis of this request, it was calculated that the total cost of the work to be performed was the equivalent of US\$682,000. Of this amount the Bank would contribute the equivalent of US\$560,000, on a contingent repayment basis. The UNA's share was estimated at the equivalent of US\$122,000.
- 1.04 The beneficiary would be the Universidad Nacional Agraria "La Molina".

II. BACKGROUND

1. Background of the Universidad Nacional Agraria "La Molina" (UNA)
- 2.01 The UNA is the successor of the former Escuela Nacional de Agricultura which was founded in 1902. In 1960 this school became a university. The UNA campus is located at kilometer 10.8 on the Lima-Cieneguilla highway, within the district of La Molina, in a suburban area that is growing up around the university.
- 2.02 The administrative organization of the university includes the university assembly, the executive council, the rector, the assistant

rector, the university management offices and its departments and units 1/. The new education law promulgated in March, 1972, requires certain changes in the university's governing bodies and in other administrative areas. However, these changes do not affect the academic structure of UNA which is determined by law 17437 for the Peruvian university system which went into effect in 1969.

- 2.03 UNA's academic organization includes 22 departments and nine academic programs. The academic program is the functional curricular structure in which certain academic departments operate. These are the actual teaching, research and social involvement units. Admission to UNA is by competitive examination which is composed of a number of specially designed academic tests. Between 15 and 20 per cent of all candidates are accepted each year.

In each of the past four years the average enrollment has been approximately 3,000 students. Since 1972 no matriculation or teaching fees have been charged. The proportions of students in the several academic programs have remained relatively constant, as can be seen in the table below for the first semester of 1975.

Students Enrolled During the First Semester of 1975  
by Academic Program

		<u>%</u>
Agronomy	573	17,6
Sciences	201	6,2
Forestry Sciences	195	6,0
Social Sciences	387	11,9
Agricultural Engineering	430	13,2
Animal Husbandry	477	14,7
Fishing	399	12,3
Food Industry	401	12,3
Graduate Studies	190	5,8
T o t a l	<u>3.253</u>	<u>100,0</u>

- 2.04 The academic calendar is on a yearly basis, with activities scheduled for two regular semesters of study of 16 weeks each and a summer cycle. The two regular semesters run from April to December and the summer cycle from January to March.
- 2.05 The UNA faculty consists of 316 professors, whose work schedules and academic levels are given below:

1/ Details of the UNA's organizational structure are given in Appendix 4.

UNA FACULTY

	<u>No.</u>	<u>%</u>
1. <u>UNA Work Schedule</u>		
Professors working exclusively for University	154	48,7
Full time professors	117	37,0
Part time professors	45	14,3
T o t a l	<u>316</u>	<u>100,0</u>
2. <u>Academic Level</u>		
Ph. D. or equivalent	79	25,0
M. S. or equivalent	93	29,4
Professional degree	109	34,5
B. S. degree	35	11,1
T o t a l	<u>316</u>	<u>100,0</u>

2.06 The UNA grants the bachelor's degree for which the student must accumulate 200 credits, which normally requires ten regular semesters. The degree of Bachelor of Science is granted in all academic programs. To obtain the professional degree, the student must submit a thesis. The UNA has a graduate program offering the Master of Science degree in the following areas: Agricultural Economics; Entomology; Plant Genetic Improvement; Nutrition; Water and Land Resources Engineering; Animal Production; Agricultural Engineering; Plant Pathology; Crop Production; and Soils 1/.

2.07 The UNA has been making a significant contribution to Peru's agricultural development. It is a training center that produces skilled individuals in the different fields of agriculture, animal husbandry and food technology. It also performs a very important service in the field of applied research through programs such as certification and production of hybrid corn seed, genetic improvement of cotton and others. Research has been carried out on corn, meats, potatoes, wheat, grasses, vegetables, fruit, fish, woods and forests, soils, low-cost foods (potato bread, sweet potato bread and several flours) and the marketing of tropical farm products. The goals of these research projects can be summarized as follows: (a) food production; (b) conservation of natural resources; and (c) application and development of technology. The funds for this research have been provided by the

1/ This program was established as part of the expansion project carried out with IDB support, and is referred to in point 2.10.

central government (the Ministry of Agriculture and the Ministry of Fishing), donations from international organizations such as FAO, the Rockefeller Foundation, the Ford Foundation and AID, private groups of the crop, cattle and fishing sectors of Peru, and the University's own resources which it obtains from the several para-university enterprises that have grown out of the research work.

2.08 As for community services, UNA has established the following:

- Short courses for foremen, community leaders, students of other universities, secondary school teachers and professionals.
- Organization of seminars, congresses, symposia, roundtables and lectures.
- Advisory and consulting services to farmers.
- Expositions, fairs and guided tours of programs being carried out by the university.
- Technical assistance to people living in the country and to private and public agencies.
- Information about the results of its research and the research of other institutions that can be put to use immediately in the countryside.
- Technical assistance to new farm cooperatives, taking advantage of the vacation periods of students. (Agreements with the Ministry of Agriculture).
- Training courses for low-income farmers and others.

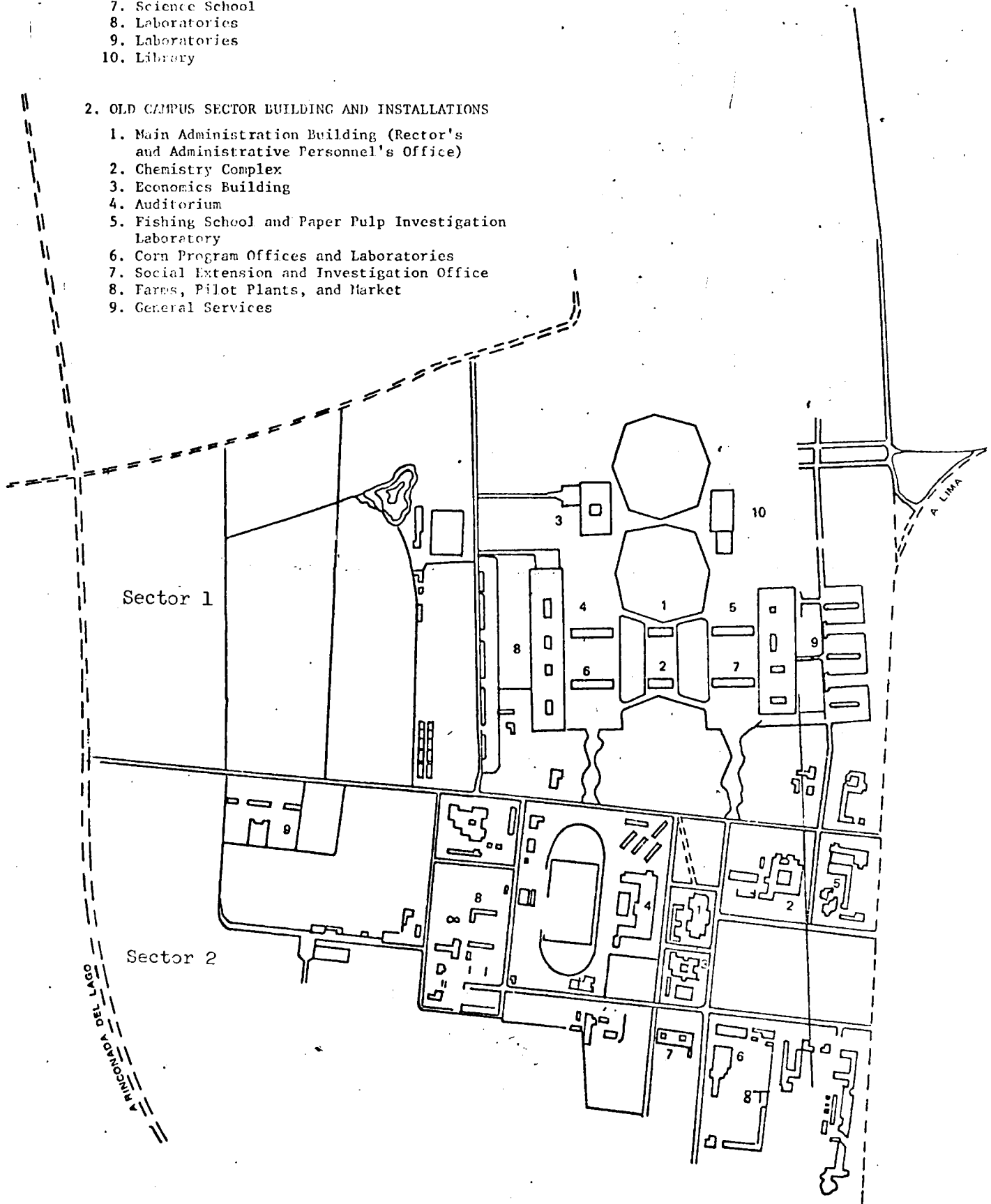
2.09 To carry out these programs, UNA has 74,280 square meters in buildings and installations and 2,025,720 square meters in experimental fields, for a total of 2,100,000 square meters at the La Molina campus. In addition, it has a 70 hectare farm in Tarapoto in the department of San Martin in the jungle part of Peru, and is conducting work in Callejon de Huaylas, in the mountains. Graph 1 shows the La Molina campus and its principal structures.

1. UNIVERSITY CITY SECTOR BUILDINGS

1. Classrooms
2. Classrooms
3. Student Center
4. Agronomy School
5. Agricultural Engineering School
6. Zoology School
7. Science School
8. Laboratories
9. Laboratories
10. Library

2. OLD CAMPUS SECTOR BUILDING AND INSTALLATIONS

1. Main Administration Building (Rector's and Administrative Personnel's Office)
2. Chemistry Complex
3. Economics Building
4. Auditorium
5. Fishing School and Paper Pulp Investigation Laboratory
6. Corn Program Offices and Laboratories
7. Social Extension and Investigation Office
8. Farms, Pilot Plants, and Market
9. General Services



## 2. Expansion Project Conducted with IDB Support

- 2.10 Loan contract 76/TF-PE was signed May 1, 1964. This loan, approved on April 30, 1964, was for the equivalent of US\$2,000,000 and was to help to finance a general development program for UNA. It was prepared with the help of AID and North Carolina State University. The total cost of the program was estimated at US\$8,700,000. Besides the Bank, other financial participants were the Government of Peru, UNA and AID. The loan's resources financed the central library, the agricultural engineering faculty building, the agricultural sciences and engineering laboratories building and the equipment in it.

## 3. Evaluation of the Executed Project

- 2.11 The period of execution of the project was extended to 1969 and the loan was completely disbursed. The final disbursement date was extended for a total of 27 months although it should be brought out that originally only 30 months were allotted for full disbursement. The delay in execution came about because of student strikes, shortage of local funds to cover cost increases, the 1966 earthquake and the extra time it took to prepare the final designs for the buildings that were to be bidden on. The total execution period was four years and nine months. Despite these delays, it is believed that the fundamental objectives of the project were properly achieved because the buildings for which the IDB financing was granted were built.

Furthermore, the overall objectives of the program, which was prepared under a technical assistance operation contracted with North Carolina State University, which was mentioned in point 2.10, were achieved. Basically these objectives can be summarized as follows:

- The University raised its total enrollment from 1,000 students in 1965 to 2,300 students by the end of the project.
- The number of professors rose from 198 at the beginning of the project to 350 at the end. Of these, more than 50% were working on a full time basis by the end of the project, which made it possible to grant fellowships so that approximately 40% could obtain a Master's or Ph. D. degree.
- The University adopted a departmental organization system, the credit system and a flexible curriculum. This made it much easier for UNA to adapt its academic structure to the system established by Law 17437 of 1969, on Peruvian universities.
- Graduate courses, at the Master of Science level, were established.
- The applied research and farm community services programs were expanded.
- The social sciences and forestry engineering faculties were established.

4. IDB Participation in Similar Operations

- 2.12 As of December 31, 1974, the IDB had authorized 22 technical cooperation operations amounting to the equivalent of US\$2,378,900 to finance studies and development programs in the subsector of university education.
- 2.13 As of the same date, the IDB had participated in four loans and five technical cooperation operations in the university subsector in Peru. These operations amounted to the equivalent of US\$7,919,300, and are described below:

A. Loans

- (a) Loan 46/TF to the Universidad Nacional de San Marcos. This loan was granted in November, 1962, for the equivalent of US\$1,500,000. Its purpose was to help to establish, maintain and equip a graduate department of sciences which would provide advanced instruction, primarily in the basic natural sciences. The loan developed slowly because of administrative organization problems in the university but the project's objectives were achieved;
- (b) Loan 76/TF granted to UNA, for the equivalent of US\$2,000,000 as described in point 2.10 of this plan;
- (c) Loan 95/TF to the Universidad de Ingeniería. This loan was granted in October, 1964, in the equivalent of US\$2,500,000, to contribute to the financing of a general development program for this university, which included the construction of classrooms and laboratories, equipment, scientific material, books and technical assistance. The program was carried out satisfactorily. The classrooms and laboratories of the mechanics, electricity, industry and health departments of the Faculty of Mine Engineering and Geology and of the institutes of mathematics and planning were built. The equipment was donated and the books bought;
- (d) Loan 124/SF to the Universidad de Trujillo. This loan was granted in December, 1966, and the contract was signed in April, 1967. The loan was for the equivalent of US\$1,800,000 and was used to help finance the construction of buildings and the purchases of equipment, furniture, books and other teaching materials. It also included a technical assistance program for the hiring of academic advisors and a firm of financial consultants. The loan was completely disbursed as of January, 1974. The final disbursement date was extended for a total of 44 months.



B. Technical Cooperation

- (a) ATN/TF-64-33 to the Government of Peru. This technical cooperation was authorized in June, 1964, for the equivalent of US\$8,600 to finance an expert who worked with the UNESCO mission which participated in the preparation of a program to remodel higher education in Peru;
- (b) ATN/TF-64-74 to the Pontificia Universidad Catolica del Peru, was authorized in March, 1964, for the equivalent of US\$8,000 for studies on administrative reorganization;
- (c) ATR/SF to the Universidad Cayetano Heredia, was authorized in April, 1966, for the equivalent of US\$17,000 for the preparation of preliminary blueprints for the construction of the Medical Sciences Faculty building;
- (d) ATC/SF-1082 to the National Council of Peruvian Universities (CONUP). This technical cooperation was authorized in December, 1970, for the equivalent of US\$100,000 for the preparation of a development plan for the Peruvian university system. In 1973, the equivalent of US\$63,000 was cancelled from this technical cooperation due to the amount of time lapsed in concluding the original program.
- (e) ATC/SF-1269 to CONUP, was approved December 28, 1973, for the equivalent of US\$49,000 to supplement technical cooperation program ATC/SF-1082. At this time the approved program is being executed now that the problems that led to the amendment of the agreement have been resolved. The amendment made it possible to contract a specialized institution in place of individual consultants to conduct part of the required work. It is estimated that the scheduled work will be concluded by October of this year.

Data available at this time will be very useful in preparing the UNA investment project.

III. OBJECTIVES

The objective of the technical cooperation being proposed here consists of cooperating with UNA in the preparation of a physical and institutional development project. To achieve this objective the following are required:

- (a) A technical-economic study to enable the university authorities to decide on the best location of UNA's present offices, bearing in mind seismic conditions at the present campus, the damage caused by the October 3, 1974 earthquake and the UNA institutional development program.

- (b) Preparation of the operations program and the determination of the locations of the development institutes 1/ which the UNA plans to establish in the interior of the country.
- (c) The preliminary and final designs for the physical plant, depending on which location is selected.
- (d) The corresponding investments project.

#### IV. DESCRIPTION OF THE PROJECT

4.01 The project will be carried out in two stages, involving the following:

##### First Stage

- (a) Preparation of the institutional development program for UNA.
- (b) Geophysical studies, (microzoning), and geological and soil mechanics studies.
- (c) Analysis of the alternative locations for the university.

##### Second Stage

- (a) Development of the physical plant.
- (b) Preparation of preliminary and final construction design.

For the execution of these aspects of each stage, individual consultants, specialized institutions and consulting firms will be used, depending on the characteristics of the work required.

The work to be performed is described briefly below:

##### First Stage 2/

##### (a) Institutional Development

4.02 The institutional development program will be the direct responsibility of UNA as an institution since it itself is capable, using its own professors and administrators, of doing this. However, UNA will require certain specialists, not on its staff, to complete the program. For this reason, individual consultants will be used for this part of the project. The institutional development program embraces the following aspects:

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1/ Plans call for the establishment of three development institutes located in the three main zones of Peru, that is, the coast, the mountains, and the jungle. Each of these institutes would consist of a basic center and outlying units that would conduct work in research, production, training and demonstration, thereby making the University's students better acquainted with the different rural environments.

2/ The consultants who will work on the first stage will be contracted within three months of signature of the agreement.

- (a) Structuring of the development institutes;
- (b) Review and modernization of the academic structure for research, production of goods and community services;
- (c) Review and modernization of the administrative and accounting system, to provide for coordination of the activities at the main campus and at the development institutes;
- (d) Review and modernization of the curricula and the informal education programs;
- (e) Preparation of administrative standards and procedures for the para-university enterprises that produce goods and provide services, which are currently functioning in UNA and those to be developed at the institutes and their units.

The individual experts to be hired for the institutional development part of the program would be as follows:

	<u>Time</u>
One planner in higher education	3 expert/months
One specialist in nonschool education	1 expert/month
One specialist in university administration	1 expert/month
One administrator for para-university enterprises for the production of goods	2 expert/months
T o t a l	7 expert/months

(b) Geological studies, (microzoning), geophysical and soil mechanics studies

- 4.03 Geological, geophysical and soil mechanics studies will be conducted at the present university campus. These will provide UNA with an opinion of the technical conditions and the behavior of these lands if new earthquakes occur. In addition, they would also determine the earthquake control techniques that should be used in any constructions or reconstructions on these lands. Furthermore, the same studies will be conducted at another place which the university would stipulate in good time as a possible alternative location 1/.

These studies will be coordinated by the Instituto Geofisico del Peru, and/or another technical agency satisfactory to the Bank. The work will be performed jointly by three institutions, as follows:

- a) The soil mechanics studies will be the direct responsibility of UNA, through its specialized soil mechanics laboratory;
- b) The geological and geophysical studies will be conducted jointly and in collaboration with the Instituto Geofisico del Peru and/or

1/ The UNA is looking at three sites as possible locations for the campus. This would make it possible to know the alternative site before the aforementioned studies begin.

another technical agency satisfactory to the Bank and by a specialized foreign institution whose cooperation would be in the form of experts from the institution to be contracted for a period of two/man/months; 1/

- (c) The university, the Instituto Geofísico del Perú and/or another technical agency satisfactory to the Bank and the foreign institution will conduct all necessary experimental studies and examine existing historical data concerning seismic developments in previous years so as to draw conclusions about the decisions to be considered.

(c) Analysis of Alternative Locations for the University

- 4.04 Bearing in mind the work of the institutional development group, the geophysical, geological and soil mechanics studies, the assessment reports on damages to the buildings of the present La Molina campus and other available data, the alternative sites for the main campus of the UNA and the institutes in the coast, mountains, and jungle areas will be evaluated to enable UNA authorities to take a decision on whether to rebuild the La Molina campus or move it to another site and to determine the specific places where the development institute would be built. In the event that it is decided to keep the UNA at its present location, the consultants will indicate what special precautions should be taken in the reconstruction or in future construction. A specialized institution would be contracted for this analysis of the alternatives because it is believed that the conclusions that would be used for the basis for the decision should be reached by an institution of recognized standing in this field 2/. The experts to be used by the institution would be the following:

One specialist in planning of university construction	3 expert/months
Two structural engineers	3 expert/months
One specialist in geotechnology	3 expert/months
One economist	2 expert/months

- 4.05 Once the university reaches its decision on the location of the main campus and the development institutes, it would present to the Bank the alternative selected, giving the institutional, physical and economic reasons that led to it. If the Bank has no objections, the second stage of the cooperation would start.

1/ It is thought that an institution from the United States, Mexico, or Chile could be used since these are countries subject to earthquakes and which have advocated the systematic study of earthquakes.

2/ As specialized institutions, thought has been given to CONESCAL which has been working with the National Council of Peruvian Universities in technical cooperation ATC/1269-PE, as mentioned in point 2.14 B (e) of this Plan of Operations.

Second Stage 1/

(a) Development of the Physical Plant

- 4.06 Based on the decision taken regarding the construction or reconstruction plan, the programs that will be the basis for the preparation of the preliminary and final designs would start. A specialized institution would have to be available to cooperate in this work, for the reasons mentioned above.

(b) Preliminary and Final Construction Designs

- 4.07 Based on the construction plans and the bidding competitions conducted, the preliminary and final designs would be drawn up. A consulting firm would be hired for this work, considering its characteristics.

Overall Coordination of the Project

- 4.08 For coordinated progress of the technical cooperation project and the writing of the final physical and institutional development project, a general coordinator would be contracted for a period of 15 months. This coordinator would work under the authority of the rector of the university. It has been observed that in certain technical cooperation agreements entered into by the Bank for the preparation of investment projects, that have used several individual consultants, it is frequently difficult to achieve harmony in the work since the partial reports are of high quality but they are not compatible. Considering the nature of the work that this coordinator will do, which requires a full time person who furthermore will be the only consultant with an overview of both stages of the cooperation and with the responsibility for presenting the complete physical and institutional development project, it is considered wise that the position be financed by the IDB contribution. The coordinator's functions would be as follows:

1. Overall coordination of the project.
2. Cooperation with the university in identifying, selecting and contracting the consultant included in this project.
3. Cooperation with UNA in supervising the work programs to be carried out with the help of the different consulting groups.
4. Coordination of the work of the different consultants with the local personnel that UNA assigns to the project.
5. Presentation of periodic reports and coordination of the presentation of the partial and final reports.
6. Preparation of the final project for the physical and institutional development of UNA.

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1/ Within 30 days of the communication from the Bank regarding the decision that UNA is to take, the consultants for this stage would be contracted.

- 4.09 The provision of the coordinator's services for the period covered by the second stage of the project would be subject to his performing the services as described in paragraph 4.05.

#### Local Counterpart

- 4.10 The UNA would make the following contribution as the local counterpart:

(a) For the institutional development program:

- (i) An economist specialized in rural development for a period of two expert/months.
- (ii) Four specialists to work on a full time basis as the counterparts of the individual consultants to be contracted using the IDB contribution.
- (iii) 22 educators and 18 researchers who would work on a part time basis for a total of six expert/months.

(b) For the geological, geophysical and soil mechanics studies:

- (i) Six full time specialists in soil mechanics, for a period of three months each.
- (ii) Two geophysicists, on a full time basis, for a period of two months each.

(c) For the analysis of the alternative sites:

Four full time specialists who will be the counterparts of the experts from the specialized institution contracted.

In addition to these forms of contribution, UNA will provide the per diem payments for the personnel of the institutions and the consulting company, and will provide secretarial and office personnel, materials, furniture, offices and the data processing service, as well as all other logistical support needed.

#### Selection and Contracting of Consultants

- 4.11 The UNA would choose and contract directly, as appropriate, the services of the consulting firms, specialized institutions and/or individual experts who would be paid from the technical cooperation resources, following Bank standards as established in document AT-80-10 of March 4, 1974.

#### Tentative Timetable for Activities

- 4.12 The technical cooperation operation is scheduled to be completed in 15 months, in two different stages, the first of which would take approximately six months, and the second, nine. Graph two is the timetable of activities.

T I M E T A B L E

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<u>First Stage</u>															
Institutional Development	XXXXXXXXXXXXXX														
Topographical and Geological Studies	XXXXXXXXXXXXXXXXXXXX														
Analysis of Alternatives for Physical Plant 1/				XXXXXXXXXXXXXX											
<u>Second Stage</u>															
Development of Physical Plant								XXXXXXXXXXXXXX							
Preliminary and Final Designs for Constructions											XXXXXXXXXXXXXXXXXXXXXXXXXXXX				
<u>Coordination</u>															
Coordination and Preparation of Investment Project	XX														

The university authorities will have 30 days to present the alternative they select to the Bank.

V. COST AND FINANCING OF THE PROGRAM

5.01 The technical cooperation project would have a cost estimated at the equivalent of US\$682,000, of which the Bank would provide the equivalent of US\$560,000 and the university, the equivalent of US\$122,000, as broken down in the table below: 1/

A. First Stage (Institutional development - geophysical and geological studies - alternative sites)

<u>Item</u>	<u>IDB Contribution</u>	<u>Beneficiary</u>	<u>Total</u>	<u>%</u>	<u>%</u>
1. Fees	64,000	45,000	109,000	49,6	16,0
2. Overhead	48,750 <u>2/</u>	6,500	55,250	25,1	8,1
3. International Travel	9,600	-	9,600	4,3	1,4
4. National Travel	-	2,400	2,400	1,1	0,3
5. Per Diem	8,820	12,070	20,890	9,5	3,1
6. Insurance and Vacation	2,240	-	2,240	1,0	0,4
7. Contingencies	<u>16,590</u>	<u>4,030</u>	<u>20,620</u>	<u>9,4</u>	<u>3,0</u>
Subtotal	<u>150,000</u>	<u>70,000</u>	<u>220,000</u>	<u>100,0</u>	<u>32,3</u>

B. Second Stage (Development of Physical Plant - Preparation of Preliminary and Final Designs - Preparation of Investment Project)

1. Fees	166,000	-	166,000	35,9	24,3
2. Overhead	225,000 <u>2/</u>	11,560	236,560	51,2	34,7
3. International Travel	4,800	-	4,800	1,0	0,7
4. National Travel	-	1,600	1,600	0,3	0,2
5. Per Diem	-	10,500	10,500	2,3	1,5
6. Insurance and Vacation	2,160	-	2,160	0,5	0,3
7. Contingencies	<u>12,040</u>	<u>28,340</u>	<u>40,380</u>	<u>8,8</u>	<u>6,0</u>
Subtotal	<u>410,000</u>	<u>52,000</u>	<u>462,000</u>	<u>100,0</u>	<u>67,7</u>
Grand Total	<u>560,000</u>	<u>122,000</u>	<u>682,000</u>		<u>100,0</u>
Percentages	82,1	17,9	100,0		

1/ See Appendix 1 for details of the estimated costs of the technical cooperation.

2/ Constitutes 1.5% of overhead over the cost of the honoraria from the IDB contribution for the consulting firms.



VI. ACCOUNTS TO BE CHARGED

- 6.01 The IDB contribution in the equivalent of US\$560,000 would be granted on a contingent repayment basis, chargeable to the resources of the Social Progress Trust Fund, within the Special Program for financing the Preparation of Development Projects.

VII. TECHNICAL CAPACITY OF THE EXECUTING AGENCY

- 7.01 The university has the technical capacity to execute the technical co-operation project proposed in this plan of operations, including the selection and contracting of consultants. This capacity has been seen in both the satisfactory completion of the IDB-AID-UNA project and the execution of agreements with the Government of Peru, AID, the Ford Foundation, the Rockefeller Foundation, UNDP, and others. 1/

VIII. JUSTIFICATION OF THE TECHNICAL COOPERATION PROJECT

- 8.01 As was said before, the institutional development plan that was used as the basis of the IDB-AID-UNA project was studied with the technical co-operation of North Carolina State University. Implementation of the plan allowed the university to carry out important work in the training of specialized human resources in the farm and fishing sector and the conducting of applied research in those sectors. However, La Molina can contribute much more to the development of Peru and for this reason UNA authorities and the faculty have been working on the general lines of what has been called a "University for Development" for the purpose of strengthening and improving its services to the community in accordance with present and future development work in Peru, which requires basically that human resources be trained in farm development but with another view and outlook.
- 8.02 Included in this conceptual framework are the development institutes, with their basic and outlying units. These institutes will be located in a manner consistent with the geographic demands of Peru, that is, one each in the coastal area, the mountains and the jungle, and the approaches they take toward development will differ in accordance with the great ecological diversity and the cultural, anthropological and social characteristics of these different regions.
- 8.03 These institutes will perform the following functions:
- Practical courses for students.
  - Production and marketing of goods. UNA has had success with the para-university enterprises it now operates. One of these makes a sweet potato-based bread and another, pulp and paper. The latter is being started with UNDP help. the UNA hopes to apply these experiences in developing the institutes enterprises. The intention is to make the institutes self-sustaining.

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1/ See Appendix 3.

- Direct support to teaching at different levels, both formal and informal schooling, basically for the surrounding communities.

- Applied research.

- 8.04 It should also be mentioned that these institutes will bring the students into direct contact with the real local situation and will strengthen the bond between the future professional and the rural user of his services, for the purposes of improved human comprehension and better transfer of technology.

For its part, UNA headquarters will be the administrative and academic center of the regular teaching in the agrarian sciences, professional fishing and graduate studies. It will also be the location of the basic research that will support the applied research carried out by the development institutes.

- 8.05 The earthquake of October 3, 1974, caused considerable damage to most of the university's buildings. Due to the particular soil conditions of this area, the impact of the earthquake in La Molina was greater than in the central area of Lima. Although instrument measurements were not made in La Molina itself, it is believed that the intensity of the earthquake there was between 8 and 9 on the modified Mercalli scale in comparison to 7 to 7.5 for the rest of Lima.

The UNA buildings most damaged by the earthquake were the rector's building and the building of the physical planning department, parts of which have had to be demolished because of the hazards they presented. These buildings are considered completely worthless. The university center, the classroom buildings and the faculty buildings have very serious structural damage, specifically, the large number of columns broken and cracks and splits in the reinforced concrete slabs. Because of the magnitude of this damage, it is doubtful that the buildings can be repaired. The laboratory buildings and the library did not suffer great structural damage and consequently they can probably be repaired. However, it is not enough to know whether they can be repaired or not and how much the cost will be; it is also necessary to know whether the university can be kept at La Molina and what risks it runs by being there. Consequently, the geological, geophysical and soil mechanics studies planned are essential.

- 8.06 Once the university has decided where to locate the main campus and the development institutes in the coastal, mountain and jungle areas, then the preliminary and final designs of the constructions of both the institutes and the main campus, whether it be at La Molina (reconstruction, repairs and remodeling) or at a new site, will have to be prepared.

IX. DISBURSEMENTS

- 9.01 The disbursements will be made over the 30 months following signature of the technical cooperation agreement as UNA justifies the expenditures charged to the IDB contribution with the appropriate supporting vouchers. The Bank may establish a revolving fund in the equivalent of US\$56,000 to facilitate the start of the consulting services. The local contribution would be made as the IDB contribution is disbursed. The contract with the consultants will stipulate that the final disbursement agreed upon will be subject to prior acceptance by UNA and IDB of the reports mentioned in Chapter X. This final payment will be at least 10% of the fees agreed upon with the consultants in the aforementioned contract.
- 9.02 To determine the percentage of national currency required in the contract, the policy outlined in document AT/80-10 will be followed.
- 9.03 The technical cooperation agreement will further stipulate that once these contracted services are concluded, any IDB funds not used will be cancelled automatically.

X. REPORTS

- 10.01 The following reports will be submitted:
- (i) From the UNA coordinator, with a copy for the Bank:
    - (a) Within 15 days of the start of his work, an initial report covering the program of activities to be carried out for the execution of the technical cooperation and the corresponding timetable;
    - (b) Quarterly progress reports;
    - (c) A final report on the first stage, including, in addition to his own comments, the consultants' reports;
    - (d) A final report upon conclusion of the second stage, which will be the final physical and institutional development project.
  - (ii) The individual consultants and the specialized institutions will present final reports of their activities to the coordinator and to the rector of the university, with copies for the Bank, upon completion of their respective duties.
  - (iii) From the consulting firm contracted for the preparation of the preliminary and final designs, to the UNA and with a copy for the Bank:

- (a) Within 15 days of the start of its work, an initial report;
- (b) A progress report after four months' work has been completed;
- (c) A report upon completion of its work, accompanying the preliminary and final designs.

10.02 UNA will present to the Bank:

- (a) A report containing the institutional development program, within 15 days of completion of the work of the individual consultants;
- (b) Within the 30 days following the reception of the final report of the first stage, a report indicating which alternative site for the university has been selected and the plans to implement the outlying units, indicating the institutional, technical and economic reasons on which the final decision was based;
- (c) Within 90 days following completion of this technical cooperation, a report on the work accomplished as well as an evaluation of the results. This report should include the justification of expenditures, properly certified by independent auditors to the Bank's satisfaction.

XI. SUPERVISION

- 11.01 The contracts entered into with the consulting firm, the specialized institutions and the individual consultants will establish that the Bank may exercise supervision of the program through its representative in Peru.

XII. AGREEMENT

- 12.01 The technical cooperation agreement should be signed by the Bank and UNA within 30 days of approval of this Plan of Operations by the Board of Executive Directors.
- 12.02 This agreement shall contain a clause stating that the IDB's technical cooperation is not a commitment to participate in the financing of any resulting project.

The technical cooperation agreement shall stipulate that the cooperation is being granted on the condition that its funds will be repaid if a loan is obtained for execution of the project, whether the loan comes from the Bank or some other external financing source. In the event that a loan is received from the Bank, the amount of this technical cooperation will be included in the corresponding loan and the conditions established in the respective loan contract shall be applicable to it. If the financing is obtained from some other source, UNA shall be obliged to have the amount of the credit included in the respective loan and that the sum is paid to the Bank in a single payment upon reception of the first disbursement.

XIII. EVALUATION CRITERIA

- 13.01 The technical cooperation shall be evaluated by means of an analysis of the work performed by the several consultants, specialized institutions and the consulting firm in furtherance of the objectives of this Plan of Operations. Consideration will be given to the reports called for in Chapter X and to any supervision entrusted to the Bank's representative in Peru.

XIV. ELIGIBILITY

- 14.01 The Manager of Economic and Social Development, in consultation with the Legal Advisor, has declared that this Plan of Operations is eligible for financing using resources chargeable to the Social Progress Trust Fund.

XV. DISTRIBUTION OF RESPONSIBILITIES WITHIN THE BANK

- 15.01 The basic responsibility for the entire operation belongs to Division 5, Region II, of the Operations Department. Technical responsibility will be exercised by the Department of Project Analysis, through the Sections of Education and Urban Development and Housing, of the Division of Social Projects.

XVI. RECOMMENDATION

- 16.01 The Manager of Operations submits this Plan of Operations to the President of the Bank through the Technical Assistance Committee, and recommends that, if approved, the President submit the corresponding proposed resolution to the Board of Directors for consideration.

XVII. APPENDICES

1. Breakdown of cost and financing of the project.
2. Terms of reference for the consultants.
3. List of technical assistances provided by the UNA and technical cooperation operations received by the same.
4. Academic structure of UNA.

DETALLE DEL COSTO Y EL FINANCIAMIENTO DEL PROYECTO  
ALTA COSTA

A. Primera Etapa (Desarrollo Institucional - Estudios Geofísicos y Geológicos - Alternativas de Localización)

	<u>Tiempo</u>	<u>(Ecuivalencia en US\$)</u>
<u>I. Honorarios 1/</u>		
1. <u>Coordinador</u>	7 meses/experto	14.000
2. <u>Estudios Geofísicos</u>	2 meses/experto	5.000 2/
3. <u>Desarrollo Institucional</u>		
- <u>Planificación Educación Superior</u>	3 meses/experto	7.500
- <u>Especialista en Educación no Escolarizada</u>	1 mes/experto	2.500
- <u>Administrador Universitario</u>	1 mes/experto	2.500
- <u>Administrador empresas para-universitarias de producción de bienes</u>	2 meses/experto	5.000
4. <u>Alternativas</u>		
- <u>Planificador en construcciones universitarias</u>	3 meses/experto	7.500 2/
- <u>Ingenieros estructuralistas</u>	3 meses/experto	7.500 2/
- <u>Especialista en geotecnia</u>	3 meses/experto	7.500 2/
- <u>Economista</u>	2 meses/experto	5.000 2/
<u>Total honorarios Primera Etapa</u>		<u>64.000</u>
a) <u>Expertos individuales</u>		31.500
b) <u>Instituciones o firmas</u>		32.500
<u>II. Gastos Generales (13 meses experto por 2.500 x 1.5)</u>		<u>48.750</u>

III. Pasajes Internacionales

- Coordinador a Washington	800
- Geofísicos	1.600
- Planificador Educación Superior	800
- Educación no escolarizada	800
- Administrador universitario	800
- Administrador empresas para-universitarias de producción de bienes	800
- Planificador en construcciones univer- sitarias	800
- Ingenieros estructuralistas	1.600
- Especialista en geotecnia	800
- Economista	800
Subtotal	9.600

1/ Se calculó en base al equivalente de US\$2.000/mes por experto para el coordinador y al equivalente de US\$2.500/mes por experto para el resto de los especialistas considerados.

2/ En la contratación de instituciones especializadas se pagará solamente el "over-head" correspondiente a dichas instituciones, que generalmente es menor que el de las firmas consultoras. Sin embargo, a los efectos presupuestarios, se ha tomado 1.5 de los honorarios.

IV. <u>Viáticos 1/</u>	Tiempo	Equipos en 1967
- Coordinador a Washington (1) 2/	1 mes	1.110
Viáticos internos	20 días	420
- Geofísicos (2, un mes cada uno)	1 mes	2.040
Viáticos internos	12 días	510
- Planificador Educación Superior (1)	3 meses	2.250
Viáticos internos	12 días	250
- Educación no escolarizada (1)	1 mes	1.020
Viáticos internos	12 días	250
- Administrador universitario (1)	1 mes	1.020
Viáticos internos	20 días	420
- Administrador de Empresas Para-Universitarias de producción de bienes (1)	2 meses	1.640
Viáticos internos	20 días	420
Subtotal		3.820

B. Segunda Etapa (Desarrollo de Planta Física - Preparación de Anteproyectos y Proyectos - Formulación del Proyecto de Inversión).

I. Honorarios

1. Coordinador	8 meses/experto	16.000
2. Arquitectos Especializados en planificación universitaria	4 meses/experto	10.000 3/
3. Preparación de proyectos y anteproyectos		
- Arquitectos e Ingenieros especializados	56 meses/experto	140.000
Subtotal de Honorarios Segunda Etapa		166.000

II. Gastos Generales (60 meses experto x 2.500 x 1.5)	225.000
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III. Pasajes Internacionales

- Arquitectos e ingenieros en planificación y preparación de anteproyectos y proyectos	4.800
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1/ El cálculo de viáticos se realizó en base a la siguiente escala:

Washington, D.C.	US\$37,00 diarios
Lima, Perú	US\$34,00 "
Otras ciudades	US\$21,00 "

2/ Viaje propuesto al término de la primera etapa de la cooperación, en caso de ser necesario discutir en el Banco la decisión sobre la ubicación del "campus" e institutos (ver párrafo 5.04).

3/ Se hizo el cálculo considerando la utilización de una institución o firma consultora.

CONTINUA DE PÁG. 1/

Formación

1. Contraparte para los especialistas contratados con el aporte del BID		
a. 2 en Geofísica,	2 meses	3.100
b. 1 en educación superior	3 meses	2.300
c. 1 en educación no escolarizada	1 mes	775
d. 1 en administración universitaria	1 mes	800
e. 1 en administración de empresas,	2 meses	1.550
f. 1 en construcciones universitarias	3 meses	2.325
g. 2 en estructuras	3 meses	4.650
h. 1 en geotecnia	3 meses	2.325
i. 1 economista especializado en desarrollo rural	2 meses	3.000
2. Estudio Geológico (sector mecánica de suelos)		1.000
3. 6 Especialistas (US\$2.325 c/u)	3 meses	13.950
4. 22 docentes colaboradores por los departamentos académicos, a tiempo parcial (US\$230 c/u)		5.060
5. 18 investigadores de los programas de investigación, a tiempo parcial (US\$230 c/u)		4.140
		<u>45.000</u>
Subtotal		

Gastos Generales

1 CEPDA (Centro Estadístico de Procesamiento de Datos)		775
2 Local en Lima	15 meses	7.000
3 Personal auxiliar:		
a. Secretaria	15 meses	2.715
b. Mecanógrafa	15 meses	1.735
c. Dibujante a tiempo parcial	15 meses	2.715
4 Materiales y otros:		
- Xerox		260
- Planos		260
- Materiales e impresiones		<u>2.600</u>
		18.060

1/ La contrapartida de la UNA es realmente más amplia de lo cuantificado, ya que el cuerpo de técnicos y profesores y las instalaciones de la Universidad serán ampliamente utilizados en las operaciones de esta cooperación técnica. La colaboración de los especialistas de la Universidad se concentra en la primera etapa de la cooperación técnica.



# Viáticos

	tiempo	
- Geofísicos (2, un mes cada uno)	1 mes	2.040
Viáticos internos	12 días	510
- Planificadas en construcciones universitarias (1)	3 meses	2.250
Viáticos internos	20 días	420
- Ingenieros estructuralistas (2)	3 meses(1-1/2 c/u)	2.250
Viáticos internos	10 días	420
- Especialista en Geotecnia (1)	3 meses	2.250
- Economista	2 meses	1.040
Viáticos internos	13 días	280
- Arquitectos e Ingenieros (2)	4 meses (3+1)	3.270
Viáticos internos	21 días	450
- Arquitectos e Ingenieros preparación de anteproyectos (2)	4 meses (c/u)	5.730
Viáticos internos	25 días (c/u)	1.050

Total Viáticos

22.570

TERMINOS DE REFERENCIA

I. TERMINOS DE REFERENCIA DEL COORDINADOR

Coordinación

- 1.01 La cooperación técnica se realizará bajo la coordinación de un profesional a tiempo completo que será financiado con recursos del proyecto.
- 1.02 El Coordinador iniciará sus actividades con anticipación suficiente para coordinar con las autoridades de la Universidad y técnicos locales, los programas de trabajo y agilizar la contratación de los expertos.
- 1.03 En base al programa de actividades, al cronograma de trabajo y de común acuerdo con las autoridades de la Universidad, el Coordinador deberá coordinar todas las actividades que realicen los distintos grupos de trabajo: consultores externos, contrapartes y asesores de la Universidad.

Informes

- 1.04 El Coordinador presentará los siguientes informes:
  - a) El informe inicial, que incluirá el programa de trabajo anteriormente referido y el cronograma para su ejecución.
  - b) Informes trimestrales de progreso donde se incluirán copias de los informes de los consultores.
  - c) Un informe final de la Primera Etapa, que incluirá el diseño académico del proyecto, de acuerdo con la alternativa adoptada por la Universidad.
  - d) Un informe final que constituirá el proyecto de desarrollo físico e institucional el cual deberá contener: (i) los anteproyectos y los proyectos arquitectónicos; (ii) la lista detallada de bienes y servicios; (iii) la cuantificación de las inversiones requeridas, presentadas en forma de cuadros de financiamiento, discriminando los gastos en moneda local y en moneda extranjera; (iv) la justificación técnica y socio-económica del proyecto y (v) conclusiones y recomendaciones.

II. TERMINOS DE REFERENCIA PARA LOS ESTUDIOS DE DESARROLLO INSTITUCIONAL

- 2.00 El programa de desarrollo institucional será de responsabilidad directa de la propia Universidad. La UNA utilizará su capacidad instalada a través de sus administradores, profesores, investigadores y técnicos.

Como la Universidad no dispone de determinados especialistas para algunas actividades específicas de la labor a ser realizada, la UNA utilizará la colaboración del Banco para la contratación de expertos individuales en:

- i) Planificación de la educación superior.
- ii) Educación no escolarizada
- iii) Administración universitaria; y
- iv) Administración de empresas para-universitarias de producción.

Estos expertos reforzarán el grupo de Especialistas de la UNA que se encargarán de preparar el Plan de Desarrollo Institucional.

#### 2.01 Coordinación interna del Grupo

- 2.01.1 Las labores se desarrollarían bajo la supervisión del experto en planificación de la educación superior.
- 2.01.2 Este Experto en Planificación, iniciará sus labores por lo menos una semana antes del inicio de los trabajos de su grupo, para establecer con el Coordinador General y con el Grupo de Profesores, técnicos y administradores de la Universidad, los detalles del programa específico a ser realizado.

#### 2.02 Programas de Trabajo

- 2.02.1 Los consultores colaborarán con la Universidad a través del grupo de profesores y técnicos especialmente destacados para este fin en el diseño académico y en el proyecto de desarrollo institucional dentro de los marcos generales planteados por la UNA para la creación de los Institutos de Desarrollo.
- 2.02.2 Se establecerá un esquema de estructura académica, de investigación, de producción de bienes y de servicios a la comunidad, considerando la coordinación administrativa y académica del "campus" principal con los Institutos a ser creados. Se especificarán:
  - a) Los programas académicos, Centros, Institutos existentes o por crearse que deban ser desarrollados en el proyecto;
  - b) Los currícula, programas y actividades a ser desarrollados;
  - c) La localización geográfica de las facilidades físicas de las dependencias a ser consideradas en el proyecto;
  - d) La estructura académica, de investigación, de producción de bienes y prestación de servicios a la comunidad, así como la organización administrativa, dimensión, número de estudiantes, docentes, investigadores, técnicos y demás personal necesario para el buen funcionamiento de la nueva estructura propuesta;

- e) El sistema administrativo y contable a ser considerado en la nueva estructura;
- f) El plan de capacitación para el personal docente, de investigación técnica y administrativo que sea necesario;
- g) La relación de equipos, maquinarias, libros, mobiliario y demás materiales que sean requeridos.
- h) Considerándose las características de la UNA como Universidad Agraria, será importante contar en el grupo con la participación de un economista agrícola, especialista en desarrollo rural, proporcionado por la Universidad. Este economista analizará las tendencias históricas, planes, programas y proyectos de desarrollo agropecuario, etc., para colaborar en la definición de la creación y localización de los núcleos regionales. Además, dentro del marco de referencia sectorial regional, precisará las necesidades de recursos humanos a nivel profesional y técnico, aprovechando economías internas de escala (es decir, que se puedan atribuir directamente a la institución educacional) y economías externas (atribuibles a la infraestructura socio-económica de la comunidad), para obtener la eficiente utilización de graduados a costos mínimos.

La UNA contratará cuatro expertos individuales para reforzar el grupo de Desarrollo Institucional. Estos expertos actuarán de manera totalmente coordinada con los expertos locales, de acuerdo con el programa anteriormente descrito en estos términos de referencia, colaborando además específicamente en los siguientes campos:

1. Experto en Planificación Universitaria

- a) Revisión y actualización de la estructura académica: (i) métodos de enseñanza; (ii) desarrollo de programas de investigación; (iii) planes de perfeccionamiento de profesores; y (iv) revisión de programas académicos y estructuras departamentales.
- b) Estructuración de los Institutos de Desarrollo. Establecimiento de los programas de enseñanza, de producción de servicios a la comunidad a ser desarrollados en estos centros y su coordinación con el programa general de la UNA y el "campus" principal.

2. Experto en educación no escolarizada

- a) Colaboración en la revisión, actualización o establecimiento de programas de educación no formal.

b) Coordinación entre los programas de educación formal del "campus" y de educación no formal a ser desarrollados en los Institutos de Desarrollo.

c) Revisión de los programas de extensión universitaria.

3. Experto en Administración Universitaria

Colaborará con la Universidad en la revisión y actualización de su sistema de administración teniendo en cuenta: (i) la estructura administrativa; (ii) los sistemas de información administrativa; (iii) la administración de donaciones y fondos similares; (iv) administración del personal; (v) inventarios de bienes físicos; (vi) adquisiciones; y (vii) administración financiera en general, etc.

4. Experto en Administración de Empresas Para-Universitarias.

Este Experto colaborará especialmente en el establecimiento de normas de administración de las empresas de producción de bienes y servicios actualmente funcionando en la Universidad y aquéllas a ser desarrolladas en los Institutos de Desarrollo. Se estudiará el establecimiento de la estructura administrativa especializada a ser considerada, los métodos específicos de administración y control de estas empresas para-universitarias y su relación con las normas y reglamentos de la Universidad y la legislación del país.

2.03 Informes

2.03.1 Se proporcionarán los siguientes informes:

- a) Un informe inicial en el cual se establezca el programa de trabajo y el cronograma para su ejecución.
- b) Los informes de progreso que de común acuerdo, el Rector de la Universidad y el Coordinador General de la Cooperación Técnica juzguen necesarios para evaluar la marcha parcial de los trabajos.
- c) Un informe final que contendrá claramente las conclusiones y recomendaciones.

III. TERMINOS DE REFERENCIA PARA LOS ESTUDIOS GEOFISICOS, GEOLOGICOS Y MECANICA DE LOS SUELOS (Micro-zonificación)

3.01 Estos estudios serán coordinados por el Instituto Geofísico del Perú. Las labores serán realizadas conjuntamente por tres instituciones, a saber:

- a) Los estudios de mecánica de los suelos serán de responsabilidad directa de la UNA a través de su Laboratorio Especializado en esta disciplina.
  - b) Los estudios Geológicos y Geofísicos (micro-zonificación) serán realizados conjuntamente y en colaboración por el Instituto Geofísico del Perú y por una Institución especializada, extranjera, que aportaría su colaboración a través de la participación de dos meses-hombre de actividad especializada de expertos de la institución a ser contratada.
  - c) La Universidad, el Instituto Geofísico del Perú y la Institución Extranjera realizarán los estudios experimentales del caso y examinarán los datos históricos existentes sobre los acontecimientos sísmicos de los años anteriores que permitan sacar conclusiones sobre las decisiones a ser consideradas.
- 3.02 Los estudios Geofísicos, Geológicos y de mecánica de los suelos, antes referidos serán realizados en el actual lugar de la Molina y en un sitio a ser indicado por la UNA como una probable alternativa para su localización.
- 3.03 Informes
- Al término de las labores cada institución presentará un informe parcial, los mismos que serán condensados en un Informe Final con Conclusiones y Recomendaciones a ser discutidas y aprobadas por las instituciones participantes de las labores realizadas e indicará:
- a) La opinión de los consultores sobre las condiciones geofísicas, geológicas y demás características técnicas de los lugares examinados que recomienden la construcción de la Universidad.
  - b) Medidas especiales del caso a ser adoptadas en los procedimientos de construcción.
- 3.04 El Informe Final servirá como uno de los documentos básicos a ser utilizados por la Institución que examinará las alternativas de localización del "campus" principal de la UNA.

IV. TERMINOS DE REFERENCIA PARA ANALISIS DE ALTERNATIVAS DE UBICACION DEL CAMPUS PRINCIPAL DE LA UNIVERSIDAD.

- 4.01 Esta labor será encomendada a una institución o firma especializada que utilizará Especialistas en planificación de construcciones universitarias, Ingenieros Estructuralistas, Especialista en Geotecnia y un Economista. El Grupo procederá a los análisis y evaluaciones necesarias para el establecimiento de alternativas para la ubicación del Campus Principal de la UNA.
- 4.02 La Institución tomará como documentos básicos de sus trabajos:
- a) El Informe Final de los estudios geofísicos, geológicos y de mecánica de los suelos anteriormente preparados.
  - b) El Plan de Desarrollo Institucional.
  - c) Las evaluaciones de los daños causados por el terremoto del 3 de octubre de 1974; y
  - d) Otras informaciones eventualmente disponibles.
- 4.03 Los análisis y evaluaciones se harán de tal forma que la institución al final de sus trabajos presente a la UNA un informe final, fundamento que permita a la Universidad tomar una decisión sobre continuar con su campus principal en su actual ubicación en La Molina o en caso contrario trasladarse a otro sitio considerado técnicamente apropiado.
- 4.04 En el caso de la alternativa de la UNA de mantener su ubicación en el actual sitio, los consultores deberán indicar las precauciones especiales en términos de técnicas antisísmicas a ser adoptadas en las reconstrucciones y/o futuras construcciones.

V. DESARROLLO DE LA PLANTA FISICA (PREPARACION DE "LAYOUTS")

- 5.01 En base a la alternativa adoptada para ubicación del "campus" principal y del programa a ser desarrollado con la implementación de los centros regionales se procederá a los estudios.

preliminares que permitan:

- a) Establecer el programa de reparaciones y reconstrucciones si fuera ésta la alternativa.
- b) Preparar el Plan Maestro para un nuevo "campus" en el caso de la alternativa de cambio de sitio.
- c) En base a los programas de actividades a ser desarrollados por los núcleos regionales, preparar los respectivos "layouts" que servirán de base a la firma de arquitectos encargada de la preparación de los anteproyectos arquitectónicos.

5.02 Para realizar esta labor intermediaria en que se determinarán los trabajos necesarios en los campos de arquitectura e ingeniería y el establecimiento de las necesidades de espacios físicos para los núcleos regionales en base a los programas a ser desarrollados en estos núcleos, se contratará una institución especializada.

5.03 Al término de su trabajo la institución presentará a la Universidad, con copia al Banco, un informe final conteniendo el programa detallado a ser encomendado a la firma consultora para preparación de anteproyectos y proyectos arquitectónicos que se consideren necesarios a la ejecución del proyecto de desarrollo físico.

VI. TERMINOS DE REFERENCIA PARA LA PREPARACION DE LOS PROYECTOS DE ARQUITECTURA.

6.01 La firma consultora se encargará de preparar toda la documentación de obra necesaria para la construcción de todas las instalaciones físicas del proyecto. Para ello trabajará en estrecha relación con el Coordinador del Programa a los efectos de satisfacer en su proyecto las necesidades de espacio y funcionamiento que el buen uso de la Universidad requiera.

6.02 A tal efecto la firma consultora preparará:

- a) Anteproyectos para todas las obras de la Universidad, nuevas y/o de reconstrucción, los que deberán ser aprobados por las autoridades universitarias. Estos anteproyectos incluirán una estimación preliminar de costos y especificaciones de construcción.
- b) Una vez aprobados los anteproyectos, prepararán planos finales que incluirán los planos de construcción y detalle de las obras e instalaciones especiales para los edificios



de la Universidad, sus especificaciones técnicas, cálculo, de costos y calendarios de construcción e inversión en moneda local o extranjera.

- c) Prepararán toda la documentación necesaria para el llamado a licitación para la construcción de las obras proyectadas.
- d) La firma consultora prestará toda la colaboración necesaria a las autoridades universitarias durante la preparación del proyecto de obras a los efectos de presentar ante un organismo financiero internacional toda la documentación técnica requerida para la solicitud de un préstamo para la financiación del Programa de Obras.

6.03 Informes

- a) La firma consultora deberá presentar a la Universidad con copia al Banco un informe al inicio de sus labores, uno de progreso a los 4 meses y un informe final con los anteproyectos y proyectos de la planta física.

RELACION DE ASISTENCIAS TECNICAS PRESTADAS POR LA UNA Y  
COOPERACIONES TECNICAS RECIBIDAS

- Convenios con el Ministerio de Agricultura para prestar asistencia técnica a las cooperativas agrícolas y realizar investigaciones aplicadas que conduzcan a tesis de post-grado y que estén relacionadas con problemas detectados por los profesores y estudiantes en sus visitas a las cooperativas agrícolas.
- Convenios con el Ministerio de Pesquería.  
  
Cooperación Técnica para la instalación de un laboratorio de pulpa y papel - UNDP (1973).
- Cooperación Técnica a la Escuela de Foresta y Centro de Producción de Alimentos por parte del UNDP.
- La Universidad ha contado con la colaboración de la Universidad de Carolina del Norte para su programa de desarrollo académico en el cual se ha incluido la departamentalización, institución del sistema de créditos y creación de cursos de post-grado.
- Ha contado con la colaboración de la Fundación Ford a través de "grants" para desarrollar programas de perfeccionamiento docente en el sector de las ciencias básicas y para la implementación de estudios de ciencias sociales relacionadas con el sector agrario.
- La Fundación Rockefeller ha colaborado con la UNA en:
  - a) Plan de Capacitación docente especialmente a través de becas de post-grado en el extranjero.
  - b) Implantación de cursos de post-grado (Escuela para Graduados); y
  - c) Fondo para adquisición de libros.
- El programa LASPAU viene colaborando con la Universidad en programas de becas para estudio en el exterior.

La AID a través de convenios con el Ministerio de Agricultura viene colaborando con la UNA en programas de investigación en los sectores de alimentos, especialmente carnes y los llamados alimentos no tradicionales (soya, camote-pan, etc.).

ASAMBLEA UNIVERSITARIA

