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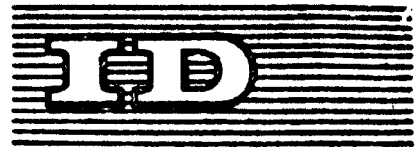
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GUATEMALA ^{1/}

by

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^{1/} The opinions expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO.

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SUMMARY

There are various institutions in Guatemala providing industrial information to businesses or persons interested in obtaining it.

This information service is provided as a subsidiary activity to the institution's main function, and sometimes amounts to no more than supplying the inquirer with relevant documentation or with particulars of other organizations which may possess it.

It follows, therefore, that the demand for information is only partially met. There is a need for an agency to undertake industrial information services regularly, as its prime function.

The industrial information available in Guatemala is supplied to interested parties by various institutions, the chief of which are:

Central American Research Institute for Industry (ICAITI), a regional body;

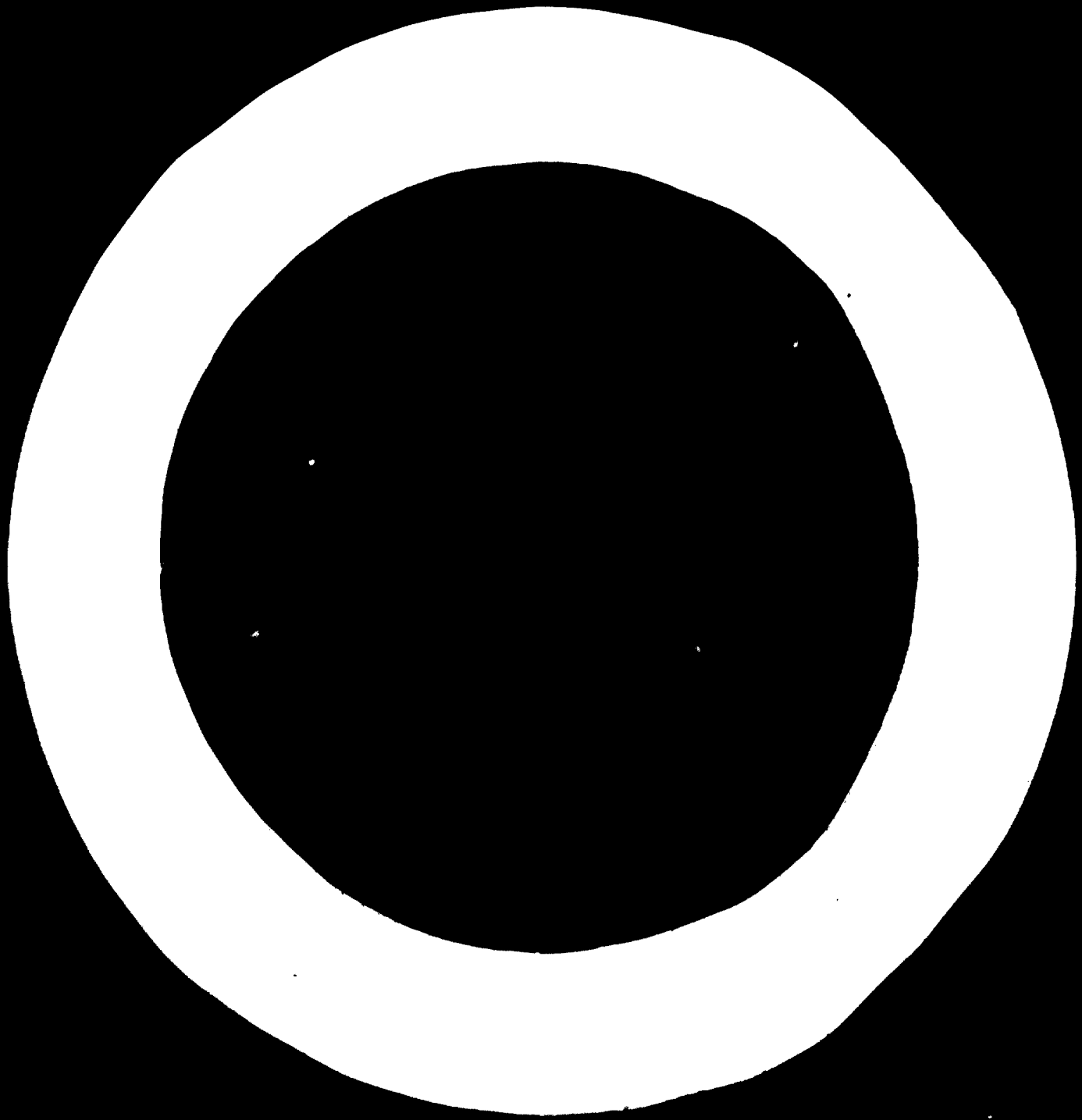
National Centre of Development, Training and Productivity (CENDAP), through its Consultancy Division;

Secretariat-General of the National Council for Economic Planning, through its Technical Department;

Bank of Guatemala, through its Department of Agricultural and Industrial Research;

Permanent Secretariat of the General Treaty of Central American Integration, a regional body, through its Industrial Section.

We describe below the activities of two of these institutions, ICAITI and CENDAP. The others provide industrial information services as a subsidiary activity to their main function.



INDUSTRIAL INFORMATION WORK IN GUATEMALA

CENTRAL AMERICAN RESEARCH INSTITUTE FOR INDUSTRY
(ICAITI), A REGIONAL BODY

ICAITI started operations in Guatemala in January 1956.

For over fourteen years ICAITI has been making an important contribution to the industrial development of the region and has carried out a considerable number of technical, economic and applied research studies on a great variety of subjects. It has made technological advances available to Central American industry and has given assistance to regional authorities and private enterprise in the planning, expansion and development of many projects.

The Central American Research Institute for Industry (ICAITI) is an independent, non-profit-making organization. It was established in July 1955 by the Governments of the five Central American Republics - Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua - with the assistance of the United Nations Technical Assistance Administration, because they recognized the need for an applied research institute in Central America.

1.1. Aims and objectives

- 1.1.1. To make studies on the production, preparation and use of local raw materials which are already available or may become so in the future, with a view to discovering or proposing new products, manufacturing processes or uses.
- 1.1.2. To make studies of existing manufacturing enterprises with a view to solving technical problems, cutting production costs, improving production techniques, discovering useful by-products, reducing and eliminating risks and establishing methods of checking and controlling quality.
- 1.1.3. To collaborate with governments departments of the Central American countries, universities, technical organizations and other bodies, in order to promote scientific and industrial research and the training of technical research workers and experts, craftsmen and skilled workers.

1.2. Services it provides

Through its Division of Technological Research and its Division of Engineering and Industrial Services, ICAITI can provide public and private enterprises with the following services:

- 1.2.1. General studies and advice relating to industrial sectors and their economic prospects.
- 1.2.2. Applied research into the region's natural resources, particularly raw materials for the foodstuffs industry, and into the preservation of foodstuffs, textile fibres, hides and skins, wood, agricultural waste and plastics.
- 1.2.3. Market studies in the countries belonging to the Central American Common Market and other countries in order to find possible markets for exports from the region.
- 1.2.4. Development of new processes or products and adaptation of existing processes to the raw materials and conditions to be found in the Central American countries.
- 1.2.5. Feasibility and pre-investment studies for the establishment of new enterprises or the expansion of existing ones. These services include:
 - Advice on the financing of projects and the investment needed to carry them out;
 - Studies on the organization of industrial enterprises, manufacturing processes, management and accounting procedures, purchasing, distribution and sales systems and the transport of materials and products;
 - Evaluation of equipment and other fixed assets and of the enterprise as a whole.
- 1.2.6. Preparation of standards for industrial products and raw materials and for articles moving in trade between the Common Market countries.
- 1.2.7. Analysis and certification of the composition and quality of raw materials, other materials and products.

- 1.2.8. Evaluation of equipment and other fixed assets and of the enterprise as a whole.
- 1.2.9. Micro-biological studies for the fermentation and foodstuffs industries.
- 1.2.10. Special tests for the raw materials and processes used in the leather, textiles, food and beverages, and wood products industries, for the finished products of these industries and for plastic materials and products.
- 1.2.11. Training in methods of scientific research, particularly in foodstuffs technology.
- 1.2.12. Geological and mining studies, with particular emphasis on geochemical surveys, geological engineering, photo-geological interpretation, prospecting, petrographical tests, location of building materials, evaluation of deposits, geological studies of sites for dams and tunnels, analysis of ores.

ICAITI has a laboratory for research into the industrial applications of atomic energy. It is equipped with an atomic radiation source for experiments with gamma-ray irradiation, using a cobalt-60 unit with a capacity of 4,000 curies. ICAITI's activities in this field have been concerned mainly with the preservation of foodstuffs.

In this irradiation laboratory with its cobalt-60 unit, research is done into the preservation of tropical fruits. The aim is to be able to process a wide variety of such fruits and to encourage their production on a commercial scale.

1.3. Research and development

ICAITI's Division of Technological Research can provide inter alia the following services:

- Improvement of industrial processes
- Development of new processes
- Adaptation of industrial processes to regional raw materials
- Development of new products
- Research into vegetable and mineral resources with a view to their industrial utilization;

- Industrial processing of agricultural products
- Utilization of agricultural and industrial waste as raw materials for new processes
- Pilot-plant study of manufacturing processes to determine the economic levels for them
- Analyses, tests and trials
- Preparation of quality standards and implementation of quality control programmes.

1.4. Standardization

One of the Institute's essential functions is to draw up the ICAITI Central American standards. It lays down the minimum requirements that a product must meet in order to serve a particular purpose successfully.

The Central American standards for quality, dimensions and methods of testing and analysis serve above all to guarantee the quality of the product and to facilitate commercial dealings between the region and other countries. ICAITI has the capacity to draw up quality standards and to implement a quality control programme.

1.5. Representative clients of ICAITI

More than fifty enterprises in the private sector in Central America have made use of ICAITI's services. So have regional organizations, development bodies, international organizations and State organs.

1.6. How to make use of ICAITI's services

ICAITI's technological experience is available to private firms, public associations, government agencies and other research bodies needing technical information or advice.

1.6.1. Service contracts

The studies ICAITI is asked to make are undertaken on the basis of special contracts. The first stage is for the representative of the firm or institution and ICAITI to discuss the problem, and a proposal is then drawn up defining the nature of the problem and the approach to be taken to it. The party concerned is also given an estimate of the cost. This procedure is the basis for the preparation of a final work contract.

1.6.2. The results of the study are the client's property and ICAITI treats the data and information obtained for persons or organizations requesting its services as strictly confidential. It does not reveal any of the results of its research without previous authorization from the project's sponsor.

PARTICULARS OF THE INSTITUTIONS

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SIECA

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CENDAP

The following is an extract from the June - July 1971 issue of CENDAP, the Guatemalan Productivity Review, published by the National Centre of Development, Training and Productivity (CENDAP):

WHAT IS CENDAP?

Many people, particularly those living in towns and villages in the interior of the country, and the smaller authorities, are doubtful as to what CENDAP is and what its functions are.

Some even do not make use of its services because they do not know enough about it.

To answer their questions, we give below some particulars on the Centre.

Establishment

CENDAP is the National Centre of Development, Training and Productivity.

It is a technical, non-profit-making body providing a service. It is a decentralised agency of the Ministry of Labour and Social Security of the Guatemalan Government. It was formerly known as the Centre for Industrial Promotion and Productivity (CFPI) and the Centre for Industrial Development and Productivity (CDPI), which started operating on 12 October 1960 and 1 July 1963 respectively.

CENDAP was set up by Decree No. 57-69 of the Congress of the Republic, dated 16 October 1969. It is functionally independent, has its own property and funds and enjoys full capacity to dispose of its property, to enter into obligations and to acquire rights, in accordance with its purposes.

Management

CENDAP is run by a Board of Directors, consisting of the Minister of Labour and Social Security, who acts as Chairman, the Minister of Economic Affairs, the Secretary-General of the National Council for Economic Planning, two representatives of the Coordinating Committee of Industrial, Agricultural, Commercial and Financial associations (CACIF) and two representatives of the trade union organizations. The Secretary of the Board of Directors is the Manager of CENDAP. It also has an Advisory Board consisting of representatives of development agencies in general.

Aims

The basic aims of CENDAP can be summed up as follows: to increase the productivity of enterprises' resources and to promote the development and better use of human resources, with emphasis on intensive vocational training.

Through the training of workers, whether economically active or not, CENDAP seeks to raise the standard of living of the population and to increase national productivity. To that end CENDAP takes action in the fields of agriculture, industry, trade, crafts and services and in other sectors that have to do with the country's economy.

Organization

CENDAP consists of the following departments:

- (a) Division of Primary Vocational Training, which organizes and carries out programmes all over the country, without any cost to the workers and peasants, in the three sectors of the economy - agriculture, industry and services;
- (b) Division of Executive and Middle-level Management Training, which organizes and conducts courses at the management level;
- (c) Division of Consultancy and Development, which gives the country's enterprises specific advice.

Like any organization of its kind, it also has a Technical Instruction Department which prepares textbooks for the primary training courses, an Administrative Department, sections dealing with accounts, purchases, audio-visual aids and reproduction, promotion and public relations, and a library which is constantly being visited by students, professional persons, businessmen and participants in the various courses.

CENDAP's work is co-ordinated with that of other public and private agencies through the Unit for Co-ordination and Study of Human Resources.

Financing

CENDAP's budget is covered by an allocation under the general national budget, by additional funds derived from the modest fees charged for courses and seminars at the middle and senior levels and by payment for specific advisory services provided to enterprises at their request.

On a smaller scale it receives individual contributions in the form of donations and voluntary payments from private enterprise. These funds, like those received for middle and senior-level courses and seminars, are reinvested in the vocational training courses for skilled labour, which are completely free of charge for the workers.

Training activities

The kinds of training and courses provided by CENDAP are as follows:

- (a) Vocational training for workers in agricultural enterprises, co-operatives, factories, service enterprises, etc.;
- (b) Training of technical personnel to fill posts at levels for which there are at present no staff available;
- (c) Training of executives and middle-level management;
- (d) Technical training for industry and commerce, particularly for graduates of secondary schools who are economically inactive;
- (e) Training of counterparts within CENDAP and for industry, through practical courses given by national and foreign experts;
- (f) Training of instructors for CENDAP and for enterprises.

Vocational training at the primary level

CENDAP is giving due attention to vocational training at the primary level in the three main sectors of the economy, with a view to raising the Guatemalan worker's productivity, so that his ability and labour can be put to better use.

Since May 1970, CENDAP has organized many primary training programmes without any cost to the country's workers and peasants.

It has given courses on the operation and maintenance of agricultural machinery, pottery, carpentry and cabinet-making, maize cultivation, masonry, plumbing, bench mechanics, horticulture, basic agriculture, stock breeding, fruit growing, electricity and distribution systems, mechanized maize growing, pig raising, flower growing, domestic electrical wiring, etc., the success of which has been attested both in writing and orally by the participating workers themselves.

These primary training courses, let us say once again, are completely free of charge. They last approximately three or four months, with intensive periods of practical work

either in the fields or in the workshop, depending on the nature of the course. They are given both in the capital and in the most remote villages, once local needs have been established.

CENDAP thus goes to the workers at their place of work and no expenditure of any kind is incurred by them.

For each course CENDAP supplies:

- A highly qualified instructor
- Supplies
- Tools
- Study materials
- Fertilizers
- Seeds
- Illustrated textbooks
- Transport for the instructors and supervisors
- Illustrative films of a technical nature and such audio-visual aids as are needed to make the training more enjoyable and effective.

In some cases CENDAP provides board and lodging for the workers taking part, when they need to be kept together for an intensive course and practical work in the field.

The Division has regional agencies in different parts of the country. Their offices are at Quezaltenango for the western zone, Chiquimula for the eastern zone, and Masatenango for the southern zone. The special programmes for the Department of El Petén are run from CENDAP's headquarters in the capital.

Training of Executives and Middle-level Management

This Division conducts and promotes courses, seminars, conferences, round tables and other activities for training and improving the qualifications of middle-level technical and management personnel in all types of enterprises.

Its field of action is divided up in the following way:

Middle-level programmes

Production management (industrial engineering techniques)

Marketing and sales techniques

Supporting office techniques

Supplementary training

Personnel administration

Labour relations

Executive programmes

General management
Production management
Marketing
Financial and cost administration
Special courses for small-scale industry.

It also conducts internal information and training programmes for the staff of CENDAP.

Consultancy and development

The basic function of this Division is to give the country's enterprises technical advice, both individually and sectorally, with a view to raising the productivity of their human, material, financial, and technical resources.

Its staff are technically qualified to give advice, mainly in the following fields:

Enterprise appraisal
Management
Organisation
Production
Marketing
Economic and financial questions
General planning
Organisation of stores and warehouses
Personnel selection
Sectoral studies.

The technical staff of this Division has been expanded to meet the growing demand for its services.

Thus the basic aim of the technical advice programmes is to supply the country's enterprises, either individually or sectorally, with the technical solution to problems limiting their efficiency. This helps to increase their productivity, both individually and collectively, which in turn brings considerable gains for the employers, for the workers and for the country as a whole.

Manuals and textbooks

Apart from various manuals of a technical nature for courses at the management level, some of which are used by colleges, CENDAP has prepared seventeen textbooks for the vocational training courses at the primary level.

The following are already available:

Operation and maintenance of agricultural tractors and their tools

Pottery

Carpentry and cabinet-making

Maize cultivation

Masonry

Plumbing

Bench mechanics

Horticulture

Basic agriculture

Stock raising: cattle for milk and meat

Fruit growing

Electricity, distribution systems

Pig raising

Construction carpentry

Electrical and oxyacetylene welding

Domestic electrical wiring

Machine tools.

The following are in preparation:

Soil conservation

Maize cultivation (advanced)

Automobile mechanics

Repair of electrical domestic appliances

Footwear manufacture

Industrial tailoring

Bar-tending and cashier work

Cooking and pastry making

Masonry (advanced)

The textbooks are illustrated and written in a simple style so that they are easy to understand. They are supplied at no cost to the workers and peasants who take part in the training courses at the primary level.

The management handbooks are sold at cost price to those who ask for them or are distributed among the participants of any particular course.

Relations between CENDAP and national and foreign organizations

CENDAP maintains the most cordial relations with other national employers' and workers' organizations having similar aims and with foreign development organizations. They include the following:

- CINTERFOR (Inter-American Research and Documentation Centre on Vocational Training), Montevideo, Uruguay
- ILO (International Labour Office), Geneva, Switzerland
- OECD (Organization for Economic Co-operation and Development), Paris, France
- AID (Agency for International Development), Washington, D.C., USA
- ODECA (Organization of Central American States), San Salvador, El Salvador
- SIECA (Permanent Secretariat of the General Treaty on Central American Integration) Guatemala, Guatemala
- PFO (National Programme for Workers' Vocational Upgrading), Ministry of Labour, Madrid, Spain
- IPA (Inter-American Productivity Association), Caracas, Venezuela
- APROCAP (Productivity Association of Central America and Panama), Guatemala, Guatemala

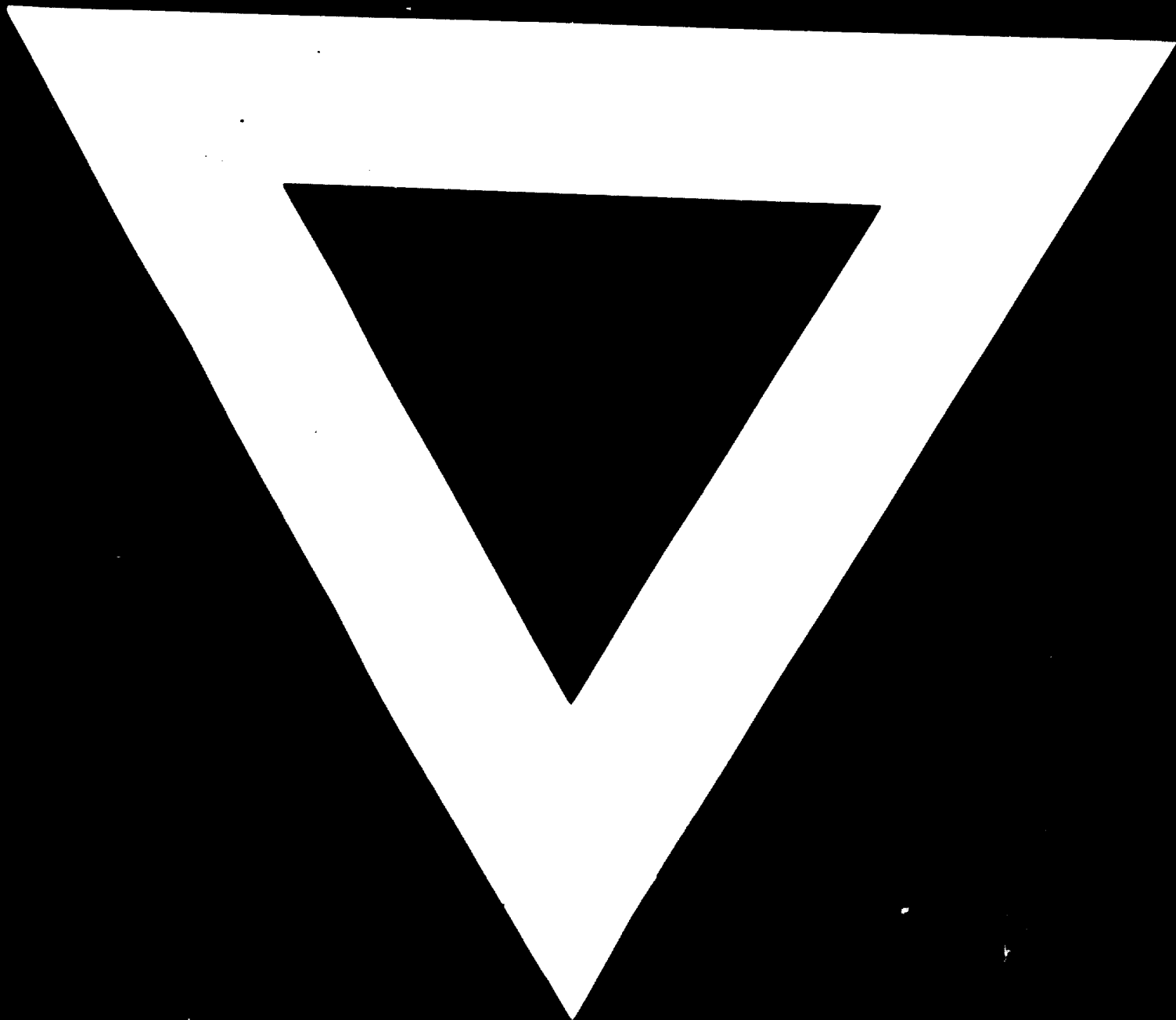
There are other bodies too numerous to mention.

CENDAP also maintains the best possible relations and exchanges experience with each and all of the vocational training organizations in Latin America, including:

- OCNEC (National Council for Technical Education), Argentina
- SENAI (National Industrial Apprenticeship Service), Brasil
- SEMAC (National Commercial Apprenticeship Service), Brasil
- SENATI (National Industrial Apprenticeship and Employment Service), Peru
- INA (National Institute of Apprenticeship), Costa Rica
- INAP (National Institute for Apprenticeship), Nicaragua

INACAP (National Vocational Training Institute), Chile
SENA (National Vocational Training Service), Colombia
SECAP (Ecuadorian Vocational Training Service), Ecuador
AFMO (National Service for the Accelerated Training of Industrial Manpower), Mexico
IFAPHU (Institute for the Training and Utilization of Human Resources), Panama
UTU (Technical University), Uruguay
INCE (National Institute of Educational Co-operation), Venezuela.





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