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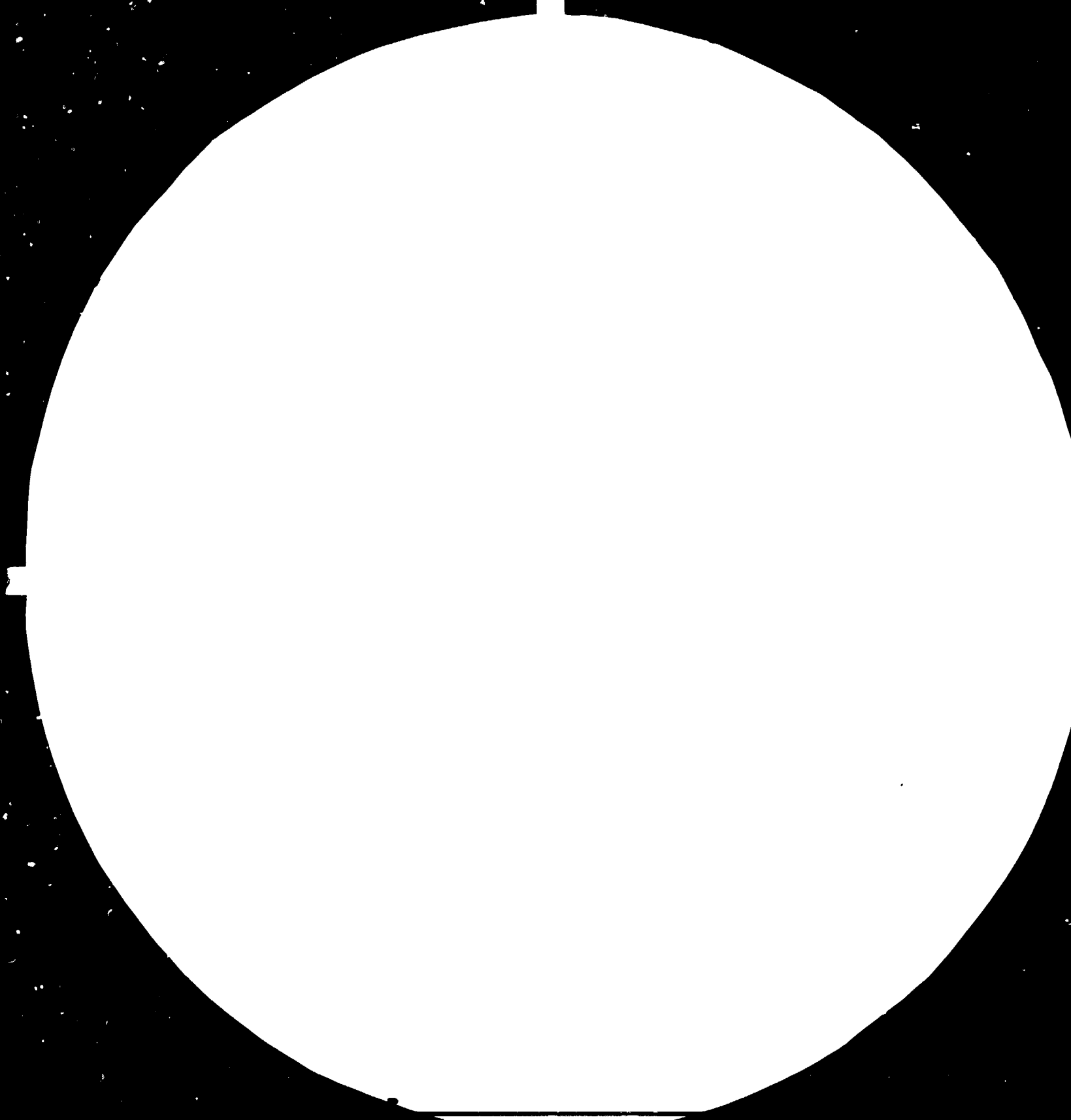
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# TIES 14590 NEWSLETTER

## TECHNOLOGICAL INFORMATION EXCHANGE SYSTEM

Issue No. 24

February 1984

Dear Reader,

The final month of 1983 and the first of 1984 have been filled with activities in preparation for the rather large work programme that the Technology Programme has before it. TIES itself has plenty of interesting work ahead. Following the recommendations of the Caracas meeting, preliminary steps have been undertaken to initiate regional co-operation within the TIES context, to advise member countries on their information processing systems, to prepare training programmes for registry personnel and to complete ongoing studies and to initiate new ones.

Towards the end of December we hosted a very lively expert group meeting on technology exports from developing countries, a short résumé of which you will find in these pages.

We would also like to draw your attention to two articles, one from Costa Rica on a draft law on the transfer of technology, and the other from Malaysia on royalty payments in technology transfer contracts. In both cases, comments are earnestly sought and we would ask that these be sent to the editor of the TIES Newsletter.

Preparations for UNIDO IV, to be held in Vienna from 2 to 18 August 1984, are well into their final stages, and its background documents will be available in all United Nations languages shortly.

G. S. Gouri  
Director  
Division for Industrial Studies

### *UNIDO activities*

#### TECHNOLOGY EXPORTS FROM DEVELOPING COUNTRIES

An Expert Group Meeting on Technology Exports from Developing Countries was held in Vienna from 19 to 21 December 1983. The purpose of the meeting was to review the experience of some leading developing countries in the field of technology exports and to identify constraints and potentials for identifying policy actions to be taken by the governments of developing countries in order to promote technology exports. The meeting was to discuss and make recommendations concerning information mechanisms for promoting and facilitating an international exchange of commercially available technologies developed or adapted in developing countries and to identify the lines

for international action and, in particular, further action to be taken by UNIDO in this field.

UNIDO, guided by the recommendations of its Third General Conference, had collected information on technologies from developing countries which were published in UNIDO's Development and Transfer of Technology Series (DTT Series). In preparing these volumes, UNIDO undertook a survey of selected research and development institutes in developing countries through the use of questionnaires.

With respect to studies, UNIDO initiated five country studies (Argentina, Portugal, Yugoslavia, Egypt and Pakistan) on technology exports from developing countries. Furthermore, a summary report, based on the findings of these studies and available literature was prepared.

The studies provide a rich basis for observation and cross comparisons, as the field surveys carried out at the enterprise-level in this respect were guided by a specially elaborated questionnaire aimed at the existing and potential export enterprises or associations. These questionnaires were complemented by direct interviews. Preliminary conclusions with respect to the promotion of technology exports from developing countries, based on the cross comparison of the five studies and supplemented by available literature, were drawn in four action areas namely: national action; international action; study and information.

Several of the participants of the meeting presented their countries' experience with respect to technology exports and these will be published in later issues of the TIES Newsletter. In this issue we give you a paper presented by Mr. Y. H. Kim of the Republic of Korea.

#### SECOND CONSULTATION ON THE PHARMACEUTICAL INDUSTRY

The Second General Conference of the United Nations Industrial Development Organization (UNIDO), held at Lima, Peru, in March 1975, recommended that UNIDO should include among its activities a system of continuing consultations between developed and developing countries with the object of raising the share of the developing countries in world industrial output through increased international co-operation.

Twenty Consultation Meetings have been convened since 1977 covering the following industries and fields: capital goods, agri-

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cultural machinery, iron and steel, fertilizer, petrochemical, pharmaceutical, leather and leather products, vegetable oils and fats, food-processing, wood and wood products, industrial financing, and training of industrial manpower.

As such, the System of Consultations has developed to be an instrument through which the United Nations Industrial Development Organization (UNIDO) is to serve as a forum for developed and developing countries in their contacts and consultations directed towards the industrialization of developing countries.

The Second Consultation on the Pharmaceutical Industry was held at Budapest, Hungary, from 21 to 25 November 1983 and was attended by 215 participants from 66 countries, with 18 observers from 12 international organizations.

The meeting included among its main issues the contractual arrangements on the production of drugs. An ad hoc panel of experts had prepared several background documents for consideration which were related to the items to be incorporated in contractual arrangements for the transfer of technology for the manufacture of bulk drugs/intermediates (ID/WG.393/2) and the formulation of pharmaceutical dosage forms (ID/WG.393/1). Furthermore, the ad hoc panel of experts reviewed the items related to the contractual arrangements for the setting up of a plant for producing drugs in bulk (ID/WG.393/4). Discussions on these documents were lively, with a general commendation for the quality of the documents, but it was considered that certain parts could be improved. The meeting therefore advised that the final version of the earlier mentioned documents should take into account the comments and suggestions made at the Consultation Meetings. With respect to other areas of concern in contractual arrangements, the meeting recommended that UNIDO, in co-operation with the ad hoc panel, should prepare documents on items that could be included in contractual arrangements for the setting up of turn-key plants for the production of bulk drugs or intermediates included in the UNIDO illustrative list and for the production of formulations.

A full list of the documents presented at the Budapest meeting are to be found in the section of this Newsletter devoted to publications.

## Registry news

### COSTA RICA

We are bringing to the attention of our readers a review of the current situation in Costa Rica with regard to transfer of technology contracts and to a translation of a draft law on the transfer of technology. Comments on this draft law would be very much welcomed by the Ministry of Industry, Energy and Mining, Costa Rica, as well as by ourselves here at UNIDO. Please send your comments to the editor of the TIES Newsletter.

### I. Summary

At present, there is no control of transfer of technology taking place through licensing contracts.

However, the Legislative Assembly now has a bill before it which would lay the bases for this control. The bill provides for the establishment of a transfer of technology contract register and specifies the institution responsible for maintaining it, in this case, the Ministry of Industry, Energy and Mining, through its Directorate-General for Industry.

For its part, the Directorate for Industry has at the same time been carrying out a personnel training programme for different levels of responsibility, which would enable it to operate the register once the law was approved.

### II. Background

Several years ago, an initial effort was made to establish a transfer of technology register in Costa Rica, when a deputy in the Legislative Assembly submitted a bill to that effect, but the initiative did not succeed.

In 1981, project COS 81/TOI (Development of Infrastructure and National Planning Capability in Science and Technology) was started up. The project is co-ordinated by the Ministry of Planning and funded by the United Nations Interim Fund for Science and Technology for Development. There are seven national institutions concerned with science and technology, co-ordinated, as we have already said, by the Ministry of Planning, participating in this project. These institutions include the Costa Rican Social Security Fund, the universities, the National Scientific and Technological Research Council (CONICIT) and the Ministry of Industry, Energy and Mining.

The project covers a number of areas such as research, training of human resources, co-ordination of research with the country's production sector and the carrying out of studies on the various aspects of science and technology (state of the art) to be used as a basis for recommending specific policies.

In the general context of point 2 of the project outputs (establishment of machinery and policies for transfer of technology), the Ministry of Industry, Energy and Mining was responsible for working on specific output 2.2.1 (establishment of a transfer of technology register).

First of all, a study was prepared on a sampling of licensing contracts concluded by enterprises established in Costa Rica with a view to analysing the situation in the country in this area. It should be noted that these contracts, in the possession of the Central Bank, had been submitted to it only as a proof for obtaining authorization of foreign exchange for the payment of royalties, without any study having been made of them. In addition, the information generated by other studies carried out under project COS 81/TOI related to the same field were used. A few of these studies were: "Adoption of technology,

in Costa Rican industry: a study of four industrial branches". "Over-invoicing in respect of imports" and "Import monopolies: the case of propanyl".

On the basis of this information, a first draft legislative bill was prepared. International experts Pedro Roffe of UNCTAD and Antonio Figueira Barboza of Brazil then provided advisory services to help improve the drafting of the bill. Then, in keeping with established procedures in Costa Rica, the Ministry of Justice convened an inter-institutional committee involving the institutions to which the proposed machinery was relevant (Central Bank, Ministry of Finance, Ministry of Economic Affairs, National Register, Ministry of Planning, Ministry of Industry and COMICIT), which prepared the final bill sent to the Legislative Assembly, where it is being studied by the Law Commission. As was stated above, while the bill was being drafted, the Ministry of Industry was implementing a programme to train personnel at various levels of responsibility. The personnel in question belong to the Department of Industrial Advisory Services, since they are experienced in evaluating industrial projects submitted to the Ministry to obtain incentives under existing laws.

#### Draft law on the transfer of technology

(This draft has been sent for study and information to the Permanent Committee on Legal Affairs)

1. The idea of regulating the transfer of technology, particularly its importation, dates back a number of years in Costa Rica.

In recent years, the Ministry of National Planning and Economic Policy, in the framework of the science and technology project, thoroughly studied the problem and finally worked out a preliminary draft law which served as a basis for the draft that we are now submitting for the consideration of the Members of the Assembly.

The draft was prepared by an inter-institutional committee co-ordinated by the National Unit for Legal Studies (Ministry of Justice - NIDEPLAN) and made up of: Dr. Mauro Murillo, Chairman, and Mr. Enrique Pochet, of that Unit; Ms. María Teresa Elizondo, Ministry of Industry, Energy and Mining; Ms. Patricia Mora and Mr. Jorge Leiva; NIDEPLAN; Mr. Rodrigo Chacón, Central Bank; Mr. Jaime Weisleder, National Registry; Mr. Rafael Brenes, Ministry of Finance; Mr. Eduardo Doryan, COMICIT; and Mr. Porfirio Lizano, Ministry of Economic Affairs and Commerce.

It should be pointed out that the majority of Latin American countries (especially Mexico and South American countries) now have special legislation on the question.

In general, it is considered that regulation of the transfer of technology produces positive benefits for the country and that it is also useful even to the supplier, who then has clearly defined rules of play.

2. Promotion of the transfer of technology, especially if it is of foreign origin, must guarantee effective national development. In this context, the present draft law intends to achieve the following objectives:

(a) To establish a legal instrument that, together with other policy measures, would make it possible to reduce excessive technological subordination of the country with respect to developed countries, since such dependence brings with it *inter alia* a considerable drain on foreign exchange for the use of foreign trade marks, invention patents and know-how for production, technical assistance and technical services;

(b) To permit the acquisition of foreign technology only when there is no demonstrated national capacity to provide the necessary technological knowledge;

(c) To ensure that foreign technology is not acquired on conditions that are undesirable for the country;

(d) To promote a genuine transfer of technology that will permit the effective assimilation of technology by recipients in order to achieve a greater degree of technological self-determination;

(e) To ensure an appropriate balance between the legitimate interests of suppliers and recipients of technology and the national interest; and

(f) To avoid a drain of foreign exchange for unnecessary imports of technology or imports that imply an excessive or unjustified burden on our economy.

3. Basically the draft contains a definition of the various instruments that would be subject to the law (article 1); the stipulation of the inefficacy of such instruments *vis-à-vis* third parties if they have not been duly authorized (article 2); the description of the necessary content of the instruments (article 3); the prohibition of the existence of "restrictive practices", a number of examples of which are given (articles 6 and 7); the payment maxima for the acquisition of technology (article 8); regulations regarding the expenditure of foreign exchange for such payments (article 12); the prohibition against acquiring useless or undesirable technology (articles 16 and 17); the confidentiality of information regarding instruments for the transfer of technology (article 25); and provisions governing instruments already signed (transitory article).

The administration of the law would be the responsibility of the Ministry of Industry, Energy and Mining, through its Directorate General for Industries.

All aspects of the procedure for authorization of instruments are regulated in detail.

Consequently the following draft law is brought to the notice of the Members of the Assembly.

The following (Draft)

LAW ON THE TRANSFER OF TECHNOLOGY

CHAPTER I

General provisions

Article 1. The present law regulates all those instruments and contracts whose purpose is the transmission of information and knowledge for the manufacture of a product or the use of a production process that are in written form and are intended to take legal effect in Costa Rica, when the recipient of the technology is a resident of or domiciled in the country.

The following instruments and contracts are subject to the present law:

(a) The assignment, sale and licensing of trade marks and invention patents, registered according to national laws;

(b) The provision of information and know-how in the form of sketches, diagrams, models, instructions, guides, formulas, basic or detailed engineering drawings, specifications and training material not patented in Costa Rica;

(c) The provision of technical, scientific and administrative assistance in any form, as well as services for the operation, maintenance, repair, installation and assembly of equipment or the management of enterprises;

(d) Franchise licences for the production, marketing and administration of goods or services; and

(e) Any other form of the transmission of information and know-how.

Article 2. Instruments or contracts linked with international technical co-operation agreements concluded with governments or public international agencies are exempted from the provisions of this law.

Article 3. Instruments and contracts covered by the present law shall not have any effect vis-à-vis third parties nor vis-à-vis the public authorities except through the intermediary of the authorization regulated in this law, and particularly shall not have effect in the following cases:

(a) As proof of the effective use of industrial property rights;

(b) For the determination of taxable property and calculation of the tax on income, without prejudice to the fact that the beneficiary of the payment or credit must consider the latter as taxable income; and

(c) With regard to foreign exchange permits for payments that must be made abroad.

Article 4. The instruments and contracts subject to the present law shall be governed by the laws of Costa Rica, without prejudice to the international agreements and treaties applicable.

CHAPTER II

Instruments and contracts: obligations of the parties, restrictive practices and payments

Article 5. Any instrument or contract on the transfer of technology must contain:

(a) A detailed description of the specific forms and manners in which the transfer of technology will take place;

(b) A clear and precise indication of the contract value and the forms of payment, including information about the constituent elements of the technology to be transferred, in order to facilitate their technical and financial evaluation;

(c) An identification of the goods or services to be produced with the technology to be transferred;

(d) The period of validity, its beginning and end;

(e) A promise by the supplier that the technical documentation and other data requested for the specific purpose stated will be dispatched complete and in good time; and that the technology transferred will correspond to the description given in the instrument or contract;

(f) A sworn declaration by the supplier that the technology to be transferred is not the property of a third person;

(g) A provision that any invention or refinement made by the acquiring party related to the technology transferred will belong to the latter;

(h) A promise by the recipient of technology to observe the agreed quality levels, when the instrument or contract provides for the utilization of a manufacturing trade mark, a trade name or other similar identification of the supplier, and the promise by both parties to refrain from taking action calculated to injure the good name of the other party;

(i) The obligation, according to the terms of the instrument or contract and in those cases in which it is justified, to provide due training for the staff of the acquiring party, or staff designated by the latter, in the principles and operation of the technology transferred;

(j) The maximum payment limits for contracting necessary technical services for the implementation of the instruments and contracts; and

(k) Arrangements for reciprocity of treatment between the parties.

Article 6. Without prejudice to the provisions of article 19, the instruments and contracts must not contain restrictive clauses that would directly or indirectly affect technological development, limit the freedom of management action by the recipient, restrict industrialization or marketing, or in general represent an unjust or abusive

practice or one entailing legal inequality for one of the parties.

Article 7. The following, inter alia, shall be considered restrictive practices:

(a) The regulation of or direct or indirect intervention in the management of the recipient firm;

(b) The prohibition or limitation of the export of goods or services produced by the recipient;

(c) The obligation to acquire inputs or components necessary for the manufacture of the product from a specified source;

(d) The prohibition of the use of additional, supplementary or competitive technology;

(e) The obligation to acquire additional technology, inventions or future improvements from a specified source;

(f) The limitation of the recipient's research and technological development activities related to the technology transferred;

(g) Restrictions by which the recipient is compelled to introduce to the design or specifications changes that are not desired or not needed;

(h) The obligation to assign or grant licences for the use against payment or free of charge of the technology, patents, trade marks, innovations or improvements that are developed by the recipient, except in cases in which there is reciprocity or benefit for the recipient;

(i) Restriction of the recipient's liberty, for the assignment of exclusive sales or representation rights to the supplier or to any person designated by the latter;

(j) Provisions stipulating that the recipient should use staff designated by the supplier or restricting the use of local personnel;

(k) Limitations on the volume of production or the fixing of sale or resale prices for national production or exports;

(l) The obligation to acquire from a specified source the publicity material that the recipient uses or must use;

(m) Provisions stipulating that the recipient should abstain from impugning the validity of industrial property rights that are the subject of the instrument or contract;

(n) Provisions stipulating that payment must be made, or imposing other obligations, with respect to the continued use of industrial property rights that have been annulled or revoked or have lapsed;

(o) The imposition of quality control methods or quality standards not compatible with national legislation, except when the

product is intended for markets that demand such standards;

(p) The obligation to use a trade mark, trade name or any other distinctive form of the supplier's enterprise when the principal subject of the instrument or contract is not the use of a trade mark or trade name;

(q) The imposition of conditions that violate the principle of reciprocity of treatment between the parties;

(r) The obligation to submit any differences that may arise to foreign laws or to courts in other countries;

(s) Restrictions on the utilization of the technology after the termination of the contract, unless such technology is still legally protected in Costa Rica; and

(t) The obligation to make fixed minimum payments for the transfer of technology, independently of production.

Article 8. The payments or credits that the recipient must honour by reason of the acts or contracts specified in article 1 (a), (b) and (d) may not exceed the equivalent of 5 per cent of the base amount, which shall be stated.

In the event that such payments are made in respect of licences for trade marks, and for this purpose exclusively, the maximum shall be 1 per cent.

It is understood that the maxima indicated above shall be applied to an instrument or contract or to the total value of instruments or contracts related to a single instance of the transfer of technology.

The basis of calculation shall be determined as follows:

The total gross sales made by the recipient less discounts or refunds on sales, commissions, freight charges and taxes and security determined by the regulations of this law.

Article 9. The Ministry of Industry, Energy and Mining may establish lower limits than those specified in article 8 for certain economic sectors or types of products, in consideration of their importance for the development of local industry, import substitution, industrial exports and the country's economic and social development.

Article 10. In the case of the instruments and contracts specified in article 1 (c) remuneration must be based on the number of technicians, the respective individual fees and the estimated period which in the view of the parties will be necessary for the provision of the service; for this type of instrument or contract, the payment of royalties or other remuneration based on percentages of invoices or production shall not be accepted.

Article 11. Payment for the use of trade marks, trade names or invention patents shall not be allowed in instruments and contracts



signed between associated enterprises.

In order to establish the calculation base referred to in article 8, the CIF value of imported inputs originating both from the supplier of the technology and from any other company directly or indirectly associated with the latter shall also be deducted from the gross sales.

It shall be understood that association exists [between enterprises] in the following cases:

(a) When an enterprise has sufficient shares of another enterprise to control it; and

(b) When both enterprises are controlled by one and the same enterprise.

Article 12. The amounts or considerations authorized shall be paid in the currency of the supplier's country or in United States dollars, at the discretion of the Central Bank of Costa Rica. Payments made by the recipient for the travelling and living expenses of the supplier's technicians in Costa Rica shall be made exclusively in national currency.

The Central Bank of Costa Rica shall not authorize foreign exchange expenditure for the respective remittances to foreign suppliers unless it has been previously demonstrated by means of attestation issued by the Collection Department of the Directorate General for Direct Taxation that the relevant tax on such disbursements has been paid.

Article 13. No instruments or contracts shall be authorized whose period of validity exceeds five years.

Instruments or contracts for the assignment or licensing of invention patents and their renewal shall be authorized only for the period of their validity after corroboration where applicable of their exploitation in accordance with the relevant law.

Instruments or contracts for the assignment or licensing of trade marks may be renewed once only.

### CHAPTER III Authorization

Article 14. All physical or juridical, public or private, national or foreign persons established in the country who are recipients of technology shall request authorization of the instruments and contracts referred to in article 1.

Article 15. The examination and authorization of the instruments and contracts regulated by this law shall be within the competence of the Directorate General for Industries in the Ministry of Industries, Energy and Mining.

Article 16. The contracts and their renewals, amendments and additions must be useful for the country's technological, economical and social development.

Article 17. The Directorate General for Industries shall refuse authorization of an instrument or contract whose object it is to transfer technology for which there is proven national supply capacity of equivalent reliability or technology considered to be polluting, when other less pollutant technologies exist, or technology that entails wasteful use of energy or employs imported materials or components instead of national substitutes.

Article 18. When it is considered necessary, the Directorate may request the opinion of experts, providing where appropriate for the deposit of the corresponding fees.

The adviser must treat the information that is provided to him as confidential.

Article 19. The Directorate General for Industries shall not authorize instruments or contracts containing one or more restrictive clauses as defined in article 7 of this law, unless the supplier of the technology proves in the opinion of the Directorate that in certain cases one or some of the practices are not restrictive in character or that they correspond to practices that are justified in consideration of the special nature of the technology provided.

Article 20. Instruments and contracts subject to this law must be submitted to the Directorate General for Industries in Spanish or, failing that, must be translated officially; in the latter case, the version in the original language shall also be submitted.

Instruments or contracts must be submitted within the two months following the date of their signature.

Amendments or additions to the instruments and contracts shall be subject to the same regulations as the originals and shall not be valid without the corresponding authorization.

Article 21. If, when the instrument or contract has been studied, correctable defects should be discovered, the party concerned will be notified so that he can make the corrections required within a period of two months.

Article 22. The Directorate General for Industries must decide whether the application for authorization is justified or not at the latest one month after the submitter has prepared it for final decision. The Directorate shall determine what background information must be sent by the parties concerned in order to make possible the study and authorization provided for in this law.

If applications are presented within the time-limit established in article 20 of this law, authorization shall take effect as from the date on which the instruments and contracts were concluded. After that period has elapsed the authorization shall take effect only from the date on which the application was submitted.

When the period established for the decision on applications has elapsed without any decision having been taken, the instrument or contract in question shall be understood to be authorized with full legal effect.

Article 23. When the requirements provided in this law have been satisfied, the Directorate General for Industries will dispatch an authorization certificate.

It will be communicated to the Industrial Property Register in the case of instruments and contracts referring to industrial property rights, so that the appropriate annotation can be made.

Article 24. A decision to refuse authorization may be appealed against within ten working days to the Minister responsible for the branch in question, who must decide the matter within the subsequent month.

#### CHAPTER IV

##### Final provisions

Article 25. Information regarding authorizations regulated by this law shall be considered confidential, with the exception of the following particulars: the name of the supplier; the name of the recipient; the subject of the instrument or contract; the period of validity; authorized values; and the purpose of the instrument or contract.

Article 26. The Directorate General for Industries may request any information conducive to verification of the form in which the instruments or contracts authorized are implemented.

If it should prove that in practice the instrument or contract is being implemented contrary to the provisions of this law, the authorization shall be revoked, the interested party being given a hearing.

Article 27. A National Committee for the Transfer of Technology is set up and will be organized by executive decree as an advisory body to the Directorate General for Industries on matters related to the implementation of this law.

Article 28. This law concerns a matter of public order and shall take effect as from the date of its publication.

Transitory provision: Clearly dated instruments and contracts signed before the entry into force of this law must be submitted for registration to the Directorate General for Industries within one month. The Directorate may not refuse their registration. In the event that this requirement is not fulfilled, the instruments or contracts shall be considered as ineffective for the purposes of this law.

Contracts in which amendments or extensions agreed upon are signed after the entry into force of this law shall be subject to its provisions.

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## TECHNOLOGY EXPORTS FROM THE REPUBLIC OF KOREA

### Introduction

In general, the natural process of technological development in developing countries starts with the importing of advanced technologies. The issue of international technology transfer has drawn wide attention from both technology giving and receiving countries and international technology transfer becomes more and more important.

As many studies pointed out, economic and national development rests heavily on the development of science and technology. To achieve a rapid and solid development of technology, one should consider all the relevant environmental constraints and national resources. For a number of years, Korea has been going through a rapid - in some sectors - explosive economic development, and has now reached a technological standard which in many production sectors can only be improved by better, more modern processes. As a result, the products and production processes which are of interest in many sectors of the Korean economy and, in particular, in the manufacturing industry, are mainly those which are of the same standard as in the industrialized countries and only need modifications to make allowance for the differing national and regional background conditions reflecting the availability and costs of existing resources. The orientation of production to the standards of the industrialized countries is very significant because of Korea's dependency on exports of commercial products, industrial plants and technologies.

With an annual average growth rate of 50 per cent during 1970, production of machinery and equipment in Korea achieved the highest growth rate among developing countries. In 1980, capital-goods production was of the value of US\$14 billion, thirteen times above the 1970 level. However despite the rapid growth of domestic production, about 50 per cent of the country's machinery demand had to be covered by imports and these reached close to US\$7 billion in 1980, including considerable machinery imports for the Chanwon industrial complex.

Particularly high import dependence characterizes the user industries of mechanical equipment, accounting for over 75 per cent of local demand. The growth in imports and domestic production was also accompanied by a rapid increase in exports and in 1980 Korea exported capital goods worth US\$6 billion, accounting for 28 per cent of the country's total exports. A substantial share of exports was also accounted for by parts and components of machinery, and in particular by small- and medium-scale industrial plants.

Since the early 1960s, the technological capacity of the capital goods sector has developed rapidly. In the earlier stages, small- and medium-sized engineering workshops developed technological capabilities largely through copying, modifying or improving imported machinery. Medium-sized companies

are presently making an increased use of the licensing mechanism, mainly with foreign companies from advanced countries, for the manufacture of small- and medium-sized mechanical and electrical plants, which are mostly expected to be exported to other developing countries, largely as a result of these companies' considerable research work to adapt to specific local conditions of other developing countries.

The outlined status on technology export from Korea to other developing countries

Korea exported a total of 48 technologies in the five years from 1978 to the end of November of 1983, and royalties amounted to some US\$252 million. In consideration of the current trend of the country's economic expansion and for domestic production of various kinds of industrial equipment and plants and for quality improvement, a slight but continuous transfer of local technology is expected in the years to come. With respect to the trend of the country's technology export in terms of its nature, the results were analysed and evaluated by the Technology Transfer Center on this technology export data.

The yearly analysis on the basis of the increasing number of technology exports shows a slow increase from 1978 through 1981, followed by the start of a sharp expansion in 1982. The yearly royalty payment in the same five-year period indicates US\$40 million in 1978, US\$16 million in 1979, US\$88 million in 1980, US\$41 million in 1981, US\$21.3 million in 1982, and US\$45 million at the end of November 1983 respectively.

Seen from the angle of country paying royalties, the distribution of each country breaks down into US\$110 million for Saudi Arabia with 13 cases of technology imports, US\$51 million for Indonesia with 2, US\$40 million for Iran with 4, US\$24 million for Bangladesh with 1, US\$9 million for Libya with 2, and so on.

By industrial sector, the chemicals industry ranks the highest with 23 cases, followed by the electrical and electronics industry with 11, the machinery industry with 6, and the metallurgical and other industries with 4 respectively.

The exported industrial technologies mostly consisted of technological know-how relating to manufacturing, operating and engineering services which were developed and improved by local partners so as to be adaptable by foreign customers because of their low unit cost and high operating efficiency and economy.

The main reason for the disproportionate emphasis on Middle Eastern countries is mainly attributable to the fact that more active and progressive technological co-operative projects were made between them due to the rapid increase in construction service exports to these countries over the past decade. In these technology exports by Korean companies, the export of industrial plant is not included since information and data are not easily available. A recent Government report indicates that this particular industry has

been making rapid progress in recent years through the expansion of plant design and project engineering for overseas clients, and it shows that the supply of related machinery and equipment for installation in various industrial plants abroad is also steadily rising in extent, as well as variety. However, the critical problem in exports of industrial plants, from the point of view of Korean contractors, lies in that they are not fully able to design and engineer all types of plants upon the request of overseas clients. Due to this lack of engineering capability, they have to carry out the projected business with the help of foreign engineering firms on the basis of sub-contracting, resulting in lower profits or even occasionally showing a loss because of the high cost of fees.

The Government therefore strongly urges Korea's plant industry to make greater efforts to export small- and medium-sized industrial plants where considerable research work on modification and improvement of indigenous and imported technologies have been done to match their own technical capabilities.

Industrial technologies and plants available from Korea

The concentration on the promotion of a mutual technology exchange programme among developing countries has an important significance for their industrial and economic development in view of limited domestic markets for their products as well as their relative shortage of capital.

The Korean Government places great emphasis on strengthening the co-operative relationship among developing countries so that each developing country's technical development capacity can be improved on a mutual benefit basis. As a move in this direction, the Technology Transfer Center in 1982 selected some 126 technical items available from Korean industrial technologies and plants from the chemical, textile, electrical and electronics industries, machinery, iron and steel, and other industrial areas.

The distribution of each industrial area can be broken down into 45 items of the chemical, 10 of the textile, 27 of the electrical and electronics industries, 37 of the machinery, 5 of the iron and steel industries, and 2 from other industrial areas.

In addition, 97 technical items were also identified in 1983, breaking down into 46 items for the chemical, 10 for the iron and steel, 29 for the machinery, 7 for the electrical and electronics industries and 4 for other industries.

The technical contents disclosed in Industrial technologies and plants available from Korea cover a broad spectrum of technologies and plants ranging from highly sophisticated technological areas such as polystyrene resin making plants to small and simple ones like socks knitting machines. They are intended to present other developing countries with a comprehensive guide to plants and its manufacturing and operating know-how available from related industries in Korea.

## PORTUGAL'S FOREIGN INVESTMENT INSTITUTE'S ACTIVITIES

The foreign direct investment operations approved by the Institute throughout the first half of 1983 reached Esc. 7,470.8 million, or a 93 per cent increase as against the same period of the preceding year. That value does not include an amount of around Esc. 6 million relative to capital increases by means of capitalization of the asset revaluation reserves.

The portion corresponding to currency imports totalled Esc. 6,058.3 million, accounting for 82 per cent of the total foreign direct investment operations.

As for the outstanding foreign direct investment operations, reference should be made to:

- the operations connected with the creation and expansion of companies, which accounted for 66 per cent of the total approved;

- the share of foreign direct investment channelled into stabilization projects, which, in comparative terms, accounted for 16 per cent of the total approved, experienced a significant increase, in value terms, as against the similar period of the preceding year, i.e., three times and a half greater than the amount for the first half of 1982.

A breakdown according to the origin of capital shows that the EEC countries take the lead accounting for 45 per cent of the total foreign direct investment operations approved. Among those countries, France holds a privileged position (26 per cent), followed by the United Kingdom (9 per cent) and the Federal Republic of Germany (6 per cent). The EFTA was responsible for around 13 per cent of the total approved, most of the funds having come from Switzerland.

The United States of America and Spain were responsible for 10 per cent and 8 per cent respectively. The positions held by Hong Kong (9 per cent) and by Brazil (6 per cent) are also worth mentioning.

A sectoral breakdown shows that banks and other monetary and financial institutions stand out accounting for 26 per cent of the total approved.

The manufacturing of metal products comes next with 19 per cent, followed by wholesale trade (12 per cent), and restaurants and hotels and metal ore mining, both with 9 per cent.

## Technology acquisition

### ROYALTY PAYMENTS IN TECHNOLOGY TRANSFER AGREEMENTS

At the Caracas meeting of Heads of Technology Transfer Registries the issue of technology transfer payment evaluation was extensively discussed. The Malaysian

participant contributed to the discussion with an interesting paper questioning some of the basic issues related to technology payments and introduced an innovative approach to the basis of royalty calculation. In this article, several of the issues raised by the Malaysian participant are presented and our readers are requested to send their comments to the editor of the TIES Newsletter.

### Basis for royalty calculation

The present basis in Malaysia for calculation of running royalties is based on a percentage of the net sales value which is defined as:

"Gross sales less sales discounts or returns, transport costs (including freight), insurance, duties, taxes and any other charges."

In cases where the Licensee imports raw materials, components or parts either from the Licensor or from other related sources the costs of such raw materials, components or parts are also deducted from the gross sales value in determining the net sales value.

It is argued that although various costs and charges have been deducted from the present net sales value, it still contains the element of profits. Royalties calculated on the present basis of net sales would in effect mean paying a certain percentage of royalties on profits. The Ministry of Trade and Industry in Malaysia is considering whether this is an equitable practice particularly in cases where the Licensor is also a shareholder in the Licensee company and as such, also receives a share of the profits in the form of dividends. The Ministry is considering an alternative basis for royalty calculation based on the 'Standard Works Cost'.

The 'Standard Works Cost' being the estimated production costs of the licensed product calculated by taking into consideration all estimated factory overheads in respect of the licensed products less:

- (i) the aggregate invoiced amount of components and raw materials for manufacturing licensed products purchased from the Licensor (including Licensor's subsidiary companies and/or related companies);
- (ii) import duties and various expenses and charges incurred for importing such components and raw materials;
- (iii) transport costs (including freight);
- (iv) insurance.

Use of the above proposed basis would eliminate the inclusion of imported materials/components and the profit element in the calculation of royalties.

The concept of Standard Works Cost raises certain questions, in particular whether it is a more equitable and pragmatic basis than Net Sales, and if it would be acceptable to potential licensors. It may also be argued that 'Standard Works Cost' be a good basis for

calculatio. when it concerns technology transfer transactions where the Licensor has country participation in the Licensee's enterprise.

#### Payment of fees under management agreements

There have been cases where the majority foreign partner in a local joint-venture company imposes fees for management services provided to the joint-venture company under a management agreement. Such services primarily cover the appointment of a General Manager or Managing Director for the joint-venture company by the foreign partner and the functions and services to be provided by them. Other services included are usually assistance in the selection of a management team including foreign specialists, training of company employees, marketing and sales management (including export sales), administrative and financial management.

The question here is whether such services provided by the foreign partner to a joint-venture company should be the subject of a separate management agreement and whether they should be paid for by the joint-venture company. The foreign partner to a joint-venture project (more so if it is a majority foreign partner) should provide such management services freely as part of their contribution to the joint venture in order to ensure the success of the venture. As a partner in the joint venture, the foreign party is represented on the Board of Directors and if it is a majority partner, it normally appoints the Managing Director or General Manager. Should this be the subject of a separate management agreement and payment of management fees? In Malaysia one is of the increasing view that management services provided to a joint-venture company by the majority foreign partner should not be subject to any payment of fees nor should it be the subject of a separate management agreement. This is all the more so if one considers the fact that a joint venture in which the foreign party has a majority share is in reality the overseas subsidiary company of the foreign party. As such, the foreign party should not impose fees for providing management services to its own subsidiary company, even though it is a joint venture with local interests.

However, it remains uncertain if the same view of no payment of fees should be applied to joint-venture companies where the foreign partner holds a minority share (e.g.: 49 per cent and below) or if there should be some distinction between those companies where the foreign equity, although below 49 per cent, is still substantial and those where the foreign equity is actually very nominal (e.g.: below 10 per cent) and if so, what should be the cut-off point.

Should management agreements and management fees between a foreign management supplier and a local recipient be only permitted where the parties are totally unrelated, that is, the foreign party providing the management services do not hold any equity in the local recipient company.

\* \* \* \* \*

#### CONTRACTS FOR THE CONSTRUCTION OF OIL AND GAS PIPELINES

The following is an article based on the report of the UNIDO/ESCAP Symposium on Contracts for the Construction of Oil and Gas Pipelines held last November and on individual reports prepared by various participants. The proceedings of the Symposium are being prepared and are expected to be available in the second half of 1984. A list of documents of the meeting can be found in the publications section of this Newsletter and may be ordered from the Joint ESCAP/UNIDO Division of Industry, Human Settlements and Technology, United Nations Building, Rajadamnern Avenue, Bangkok 10200, Thailand.

The objectives of the Symposium were to initiate a dialogue between suppliers and recipients of technology in the pipeline construction industry; and to discuss specific provisions of international offshore and onshore pipeline construction contracts between national oil and gas companies and the international pipeline contractors.

In particular the discussion was to canvass which terms of a "fair and equitable" nature should be included in pipeline construction contracts. Also to be considered was the review of information and current practices with regard to pipeline construction contracts. These matters were considered with a view to formulating basic guidelines for the negotiation, conclusion and execution of oil and gas pipeline construction contracts.

The participants of the Symposium consisted of representatives from Bangladesh, China, Federal Republic of Germany, India, Japan, Malaysia, Netherlands, Republic of Korea, Thailand, Indonesia, IBA, FIDIC, various Indonesian government organizations and state enterprises, private Indonesian national companies, foreign enterprises and oil contractors and, of course, the initiating UNIDO/ESCAP bodies.

Based on several country papers, several important areas of concern were identified and discussed with respect to the contractual arrangements.

#### The clear definition of the parties to the agreement

Here it was stressed that when a contract is entered into between individual parties who are themselves made up of joint venture participants, then each individual joint venture participant should sign the agreement on its own behalf.

It was agreed between the participants that some form of a formal instrument of agreement should be executed by the parties to the agreement after all the negotiations had been completed.

#### Principal participation in terms and conditions contained in the sub-contract and the day-to-day operation of the sub-contract

There was a great difference of opinion with regard to just how involved a principal should become in this area.

Basically, three views were put forward:

- (i) The principal should have a perfect knowledge of all facets and activities which occur in relation to the sub-contract and the work being performed under the sub-contract and further, that principal approval should be sought and obtained;
- (ii) The principal should be involved in the technical and financial assessment of potential sub-contractors and their ability to perform and complete the work to be performed but should not become involved in the terms and conditions contained in the sub-contract or its day-to-day operation;
- (iii) The principal should not in any way interfere in the sub-contracting, either in the selection of the sub-contractor, the formulating of terms and conditions to be contained in the sub-contract or its day-to-day operations.

It was recognized that if the principal becomes closely involved in the running of the sub-contract he might lose his contractual rights against the contractor.

#### Scope of work

The question raised here was whether or not the scope of work should be exhaustively defined in the contract, or whether it should be expressed in general terms so that what the contractor is required to do is fulfil its contractual obligations by producing the final product to minimum contract specification requirements.

It was generally felt that there is a need to define the scope of work in detail because the contractor must have a guide by which to price his tender for the contract. It was stated that, where technical developments occur after the tendering has closed, any additional costs caused by the technological developments incorporated into the contract should be recoverable by the contractor.

#### Transportation of linepipe, other materials and equipment

On considering the question of transportation the following questions were considered:

- (a) What is the most reasonable way to regulate the question of transportation under the terms of the pipeline construction contract?
- (b) Should there be a distinction drawn between transport by land and transport by sea?
- (c) What arrangements should be made with regard to delay, risk allocation and insurance?
- (d) What should the transport contractor be advised regarding the supply of his services pursuant to the contract?

It was agreed by the participants that in order to best regulate responsibility for the transportation of pipe, materials and equipment, a thorough inspection of the pipe, materials and equipment should take place immediately prior to and after transportation has been effected. It was agreed that the mode of transport, the time at which property in the pipe and materials passes, the time at which the transfer of risk passes, and the delivery points and dates at which and by which the pipe, materials and equipment must be delivered must be clearly set out in the contract documents.

Finally, with regard to the costs of transport, it was agreed by the majority of country participants that any extra costs incurred in the transportation of the pipe materials and equipment, should lie with the contractor. Presumably, of course, this proposition is only in relation to non-principal caused increases in costs.

#### Price and terms of payment

The first question put forward in relation to the matter was whether the contractor should be given the contract on a lump sum basis (a unit price basis) or on a cost plus basis.

It was generally felt that in pipeline construction contracts a lump sum unit price is the appropriate pricing system and that only in exceptional cases should cost plus arrangements be considered.

Other questions which were raised were:

- Who takes the risk of exchange fluctuation?

- Who is to bear the risk of government interference with regard to payment?

- Should there be clear procedures set out in the contract document for the making of progress payments and the issuing of payment certificates?

- What is the appropriate deduction to be made for security of performance? Should the deductions be reduced or extinguished when the pipeline is taken over?

- What should be the position with regard to the taking over of separable portions of the pipeline?

- How is the measure of delay in progress of the works to be ascertained? Should it be ascertained by reference to critical path milestone dates, or just at the end of the contract?

- Should force majeure be catered for in pipeline construction contracts? If it is felt that force majeure should be included, should the force majeure be defined exhaustively or in general terms?

- Should the contract contain penalties for late performance etc.?

- Should provisions be made for liquidated damages?

- Who should pay for the extra costs incurred as a result of non-excusable delays? Should this include liability to pay for economic consequential loss?

- When should the principal take over the works?

#### Time of delivery and consequences of delay

It was generally acknowledged that in many pipeline construction contracts the period allowed for the completion of the pipeline was extremely short, thus requiring a fast track operation by the contractor.

It was generally agreed that only circumstances of force majeure should excuse a contractor's delay in completion of the work under the contract in accordance with the construction programme to which he has bound himself and in that event the standdown time resulting from the force majeure would be compensated to the contractor by the principal.

In the event of an inexcusable delay by the contractor, the contractor should be obliged to make good the delay at his own cost by accelerating his work programme. If the contractor has already exceeded the relevant milestone dates, then liquidated damages should be payable by the contractor to the principal. Some participants suggested that a grace period be considered which could be provided for in the contract document or granted to the contractor where the principal has not suffered disadvantage from the delay, especially in cases in which it is not yet ready to take over the pipeline system.

#### The taking over and use of the pipeline system

The participants agreed that after mechanical completion and successful completion of performance testing, the pipeline system should be taken over by the principal. One country urged that the contractor remain responsible for a specified period after the take-over. It was mentioned that take-over procedures for oil and gas pipelines are different, but that in any case take-over activities should be planned well in advance. In order to reduce standby and other costs chargeable to the principal in cases in which performance testing and take-over cannot take place due to reasons for which the principal is responsible, one country stressed the need to come to diverging take-over arrangements in such cases. In appropriate cases the possibility of taking over part of the pipeline was mentioned.

#### Liability occurring through warranties and guarantees

One of the contractor participants expressed concern about professional liability and wanted a limitation to be placed on the extent of liability. It was felt that the contractors were held liable under the contracts for damages completely disproportionate to the fee received under the agreement and, in his view, the liability in this regard should not exceed the sum of the fee payable for the services rendered pursuant to the contract.

It was agreed by the participants that, when considering the question of liability, the contractor can only be held responsible where the cause of the defect results from a contractor supplied item or from his workmanship.

Another of the country participants felt that a clear stipulation should be made in the contract for the immediate repair or replacement of parts by the contractor during the warranty period, thus mitigating the principal's losses for the time the pipeline would otherwise have been in operation.

It was generally accepted that the contractor should not be liable for consequential losses of the principal as a consequence of defects. With respect to the question of warranty period it was suggested that a one year warranty period was appropriate and that after longer periods the allocation of responsibility for the defect would be extremely difficult.

In cases in which the principal delivers the complete design and engineering package for the construction of the pipeline, no need for extension of liability would exist.

#### Security

It was a generally accepted view that bid bonds and performance bonds were a justified security and that in most cases the amount of the bonds was between 10 per cent and 15 per cent of the contract value.

Some of the contractor participants expressed concern about the use of on demand bonds by the principals. It was mentioned that in certain instances the bonds had been called upon without proper cause. It was suggested by one of the contractor participants that these bonds should be payable upon objective events or should be conditioned upon the delivery of a favourable arbitration award.

#### Applicable laws and the settlement of disputes

It was mooted that various applicable laws could apply to the contract, these applicable laws being:

- (a) the law of the country where the project is taking place - viz. tax law and special considerations;
- (b) the law which deals with the interpretation of the contract - viz. the reference laws;
- (c) the laws applicable for the resolution of disputes - viz. a neutral law (e.g. the International Court of Justice);
- (d) the law of the place where the arbitration is to be carried out.

It was felt that problems could arise as a result of the operation of the various different applicable laws. One country felt that its national laws should apply to all contracts executed in that country and also that it would be reasonable to have all contract documents drawn in the local

language. It was stressed that, in certain cases, the use of a language different from that used when the contract was originally drawn may create a situation where the laws of the country whose language was used might govern the interpretation of the contract. For example, if a FIDIC contract is redrawn in Indonesian one may encounter problems because the contract terminology is based on an Anglo-Saxon interpretation which may become ambiguous or even entirely different on its translation into the Indonesian language.

#### Termination of contract

It was felt that a termination or cancellation of a pipeline construction contract would delay the overall project and therefore should be very carefully considered by the parties and especially the principal. It was suggested that in addition to the termination or cancellation of the contract, the possibility of suspension of the overall project due to national economic reasons should be canvassed in detail in the contract documents. The view was expressed that in such an instance where the project was suspended and the particular pipeline construction contract was either suspended or terminated, the particular contractors involved should be compensated for any additional costs (actual costs) which arise as a result.

In addition to the discussion on the major contractual provisions in such agreements, the meeting focused on the issue of transfer of technological know-how, the development of local engineering and construction capabilities and the appropriate use of local materials and equipment in this specific sector.

From the various papers presented on this subject and the discussions which followed their presentation, there was general agreement that:

- Each country should develop a detailed strategy on the choice of technologies to be transferred.

- Turn-key acquisition of contract systems would not promote the desired transfer of technological knowledge.

- Detailed concept for the achievement of technology transfer should be elaborated and fixed already at the feasibility stage of the project.

- Technical qualification of local personnel should be taken into account so as to be able to receive, retain and absorb relevant technological knowledge.

- Care should be taken to ensure that acquired skills would not be lost and that the trained personnel are not transferred to other jobs just after being trained.

The meeting concluded that the discussion and dialogue initiated by UNIDO and ESCAP were extremely useful for the exchange of views and dissemination of knowledge between employers, contractors and engineers of the region in the pipeline construction area. All participants expressed their concern on unreasonable

demands being often made during the negotiation of pipeline construction contracts and they felt that any efforts by UNIDO and ESCAP would find their approval which could promote the idea of fair and reasonable contract terms and facilitate the burdensome steps of their negotiations.

The Symposium therefore recommended that UNIDO and ESCAP should prepare a manual on the preparation and negotiation of pipeline construction contracts in co-operation with relevant international professional organizations and other experts. The manual should contain guidelines to employers, contractors and engineers. It should specify risk areas, reasonable and unreasonable demands which fall within the responsibility of the relevant parties. It should also propose the appropriate regulations to ensure technology transfer and the use of local materials, equipment and services. The question of standard forms for pipeline construction contracts (offshore and onshore) for use in the Asian and Pacific Region may also be examined.

The Symposium urged UNIDO and ESCAP to study appropriate means which could activate and promote the technology transfer process in connection with pipeline construction contracts and relevant use of domestic consultancy services and material supplies. This appropriate means may be conveyed to the donor agencies for the useful utilization of their resources, adopting local supplies and services.

It is recommended that environmental risks arising from pipeline construction should be examined and closely studied by UNIDO and ESCAP in order to take adequate precautionary measures.

The Symposium strongly urged member countries, professional organizations of engineers and contractors and national oil companies to establish linkages with each other in order to ensure the use of fair and equitable practices in contractual practices, technology transfer process and the use of local supplies and services in the pipeline construction industry.

#### STUDY ON THE EVALUATION OF CONTRACTUAL ARRANGEMENTS OF THE FOOD PROCESSING INDUSTRY IN SELECTED DEVELOPING COUNTRIES

Those of our readers who were in Caracas last October to take part in the Eighth IIES meeting of Heads of Transfer of Technology Registries will recall that the meeting requested the UNIDO secretariat to present a study at the Ninth IIES meeting to be held later this year, on the evaluation of contractual arrangements of the food processing industry in developing countries. In view of the fact that a similar study has to be prepared for the Second Consultation Meeting on the Food Processing Industry (October 1984), a decision was reached that a joint study will be prepared by the relevant sections of the UNIDO secretariat.

As a contribution to this study, IIES will provide background information which will help to identify the most critical issues and



elements which are found in contractual arrangements in selected food processing industries. First priority will be given to the vegetable fats and oils processing industry (ISIC No. 3115) and vegetable and fruit processing industry (ISIC No. 3113), followed by the sugar (ISIC No. 3118), meat (ISIC No. 3111) and dairy (ISIC No. 3112) industries.

The information that UNIDO requires is the type of contractual arrangement (i.e. joint venture, franchise, licensing, turn-key deliveries, management and training); the duration of the contract; the number of contracts with foreign holdings and the percentage of these holdings; the fees, whether lump sum or royalty as well as the rate; the country(ies) with whom these contractual arrangements were made.

In view of the complexity and differentiation of the food processing sector and the existence of sub-sector specific contracts, the document will be divided into two parts. The first part will define the various contractual arrangements with foreign participation and/or co-operation in the food processing sector in developing countries and the major provisions incorporated in such contracts; the second part - with empirical character - will point at the most critical elements and provisions included in selected contractual arrangements. Due to the scope of this work and the limited time available, two consultants will be involved in the project and work in close co-operation with the UNIDO secretariat.

The final study will analyse the role of various contractual arrangements as alternatives to direct foreign equity participation and identify the most common arrangements presently applied in the food industry and its individual branches, with an indication of which arrangements are likely to gain importance in the future. It will contain as well a concise description of the most essential provisions, with an emphasis on elements typical for the food industry, and seek to identify the most critical issues and elements contained in contractual arrangements pertaining to the food industry.

It is anticipated that the consultants will conduct field missions to selected developing countries in order to obtain comments from representatives of the food processing enterprises and the respective government agencies on the major problems in the process of implementation as well as the importance and possible formulation of individual contractual provisions.

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## Publications

### List of documents for the Second Consultation on the Pharmaceutical Industry (Budapest, Hungary, 21-25 November 1983)

ID/WG.393/5 Progress Report

#### Issue and background papers

ID/WG.393/6 Contractual Arrangements for the Production of Drugs - Issue Paper.

ID/WG.393/1 Items which could be incorporated in contractual arrangements for the transfer of technology for the manufacture of those bulk drugs/intermediates included in UNIDO's Illustrative List.

ID/WG.393/4 Items which could be included in contractual arrangements for the setting up of a plant for the production of bulk drugs (or intermediates) included in UNIDO's Illustrative List.

ID/WG.393/3 Items which could be included in licensing arrangements for the transfer of technology for the formulation of pharmaceutical dosage forms.

ID/WG.393/7 Contractual Arrangements for the Production of Drugs - Background Paper.

ID/WG.393/8 Availability, pricing and transfer of technology for bulk drugs and their intermediates - Issue Paper.

ID/WG.393/9 Availability, pricing and transfer of technology for bulk drugs and their intermediates - Background Paper.

ID/WG.393/10 The development of drugs based on medicinal plants - Issue Paper.

ID/WG.393/11 The development of drugs based on medicinal plants - Background Paper.

ID/WG.393/12 The manufacture of vaccines in developing countries - Issue Paper.

ID/WG.393/13 The manufacture of vaccines in developing countries - Background Paper.

#### Reference papers

ID/WG.393/17 Relevant topics to be taken into account in the preparatory phase of technology transfer arrangements for the production of pharmaceuticals.

ID/WG.393/16 Summary of industrial property protection on pharmaceuticals in developing countries.

- ID/WG.393/ Multipurpose plant for the production of UNIDO's List of Essential Drugs based on raw materials and intermediates.
- ID/WG.393/2 Directory of Sources of Supply of 26 Essential Drugs, their chemical intermediates and some raw materials.
- UNIDO/IS.388 Water use and effluent in the Pharmaceutical Industry.
- UNIDO/IS.402 Prospects for production of vaccines and other immunizing agents in developing countries.
- ID/WG.393/15 The need of drug policies.
- ID/WG.393/14 Industrial profiles of pharmaceutical production units for formulations and bulk drugs.
- UNIDO/PC.76 Report of the Meeting about Technical Co-operation Among Developing Countries (Tunis, September 1983).
- Two papers presented at the Eighth Meeting of Heads of Technology Transfer Registries, held at Caracas, Venezuela from 17 to 21 October 1983
- ID/WG.405/5 Restrictive clauses in licensing agreements in the pharmaceutical industry by J. Cieslik.
- ID/WG.405/7 Monitoring of technology transfer agreements by regulatory agencies - an overview of policies and issues.
- List of documents for the symposium on contractual arrangements for the construction of oil and gas pipelines (Jakarta, Indonesia, 28 August - 2 September 1983)
- INT/SYNS3/T1 Overview of contracts for the construction of oil and gas pipelines in developing countries by J. R. Salter, Consultant, Secretariat's paper.
- INT/SYNS3/T1A Overview of current international practices in contracts for the construction of oil and gas pipelines by Robert W. Jewkes, Consultant, Secretariat's paper.
- INT/SYNS3/T2 Regulatory infrastructure and contract approval requirements in developing countries with special reference to ESCAP countries by H. A. Janiszewski, UNIDO, Secretariat's paper.
- INT/SYNS3/T3 Transfer of technical know-how in pipeline construction projects by Paul E. Strunk, ESCAP, Secretariat's paper.
- INT/SYNS3/T4A Development of Engineering Capabilities by R. M. Notosuwarno, ESCAP, Secretariat's paper.
- INT/SYNS3/T4 Country paper of Bangladesh by Giasuddin Ahmed and M. A. Hanne.
- INT/SYNS3/T5 Country paper of China - A general introduction to pipeline construction contracts in China - by Zheng Zhong Lian and Song Zhen Zhi.
- INT/SYNS3/T6 Country paper of India by T. M. Bhargava.
- INT/SYNS3/T7 Country paper of Indonesia prepared by Pertamina.
- INT/SYNS3/T8 Country paper of Malaysia by Mohamad Nor Haji Hamid and Chew Boon Cheong.
- INT/SYNS3/T10 Country paper of Thailand by Bodin Asavanich.
- INT/SYNS3/T11 Transfer of technology. Involvement of national resources and engineering contractual aspects by Ary Mochtar Pedju, P. T. Encona, Indonesia.
- INT/SYNS3/T12 Use of local resources in the Badak - Bontang gas pipelines project - by Tri Patra Engineering, Indonesia.
- INT/SYNS3/T13 Construction of oil and gas pipelines in Indonesia - Role of a national contractor - by Triawan Saleh, Meta Epsi Engineering, Indonesia.
- INT/SYNS3/T14 Republic of Korea experiences in the design and construction of oil and gas pipelines by Min Che Chon.
- INT/SYNS3/T15 Contracts for the construction of oil and gas pipelines by G. D. Campbell, FIDIC.
- INT/SYNS3/T16 Allocation of risk in the construction contract by Richard B. Eastman, IBA.
- INT/SYNS3/T17 A specifically formatted programme to be made mandatory for cross country engineering contracts by R.M. Hadjiwibowo, P.T. Branusa, Indonesia.
- INT/SYNS3/T18 Oil and gas pipeline construction transfer of technical know-how by Harli Saleh, Pertamina, Indonesia

## Meetings

We list hereunder a selection of the meetings to be held during the course of this year and which may be of assistance to our readers should they have long-range travel plans to work out. The list is of course liable to changes, additions and deletions.

6-9 February - EGM on (a) machinery and spare part problems in the food-processing industry (b) downstream processing activities in the vegetable oils and fats industry in developing countries, Vienna, Austria.

6-10 February - Expert Group Meeting on Shipbuilding and Ship Repair Development for Asian and Pacific Countries, Jakarta, Indonesia.

6-10 February - Regional Workshop on Formulation of Pesticides, New Delhi, India.

2nd half of February - Subregional Meeting on the Promotion of Intra-African Industrial Co-operation within the Framework of the IDDA, Tunis, Tunisia.

20-24 February - Regional Workshop on Industrial Contingency Plans in the West and Central African Region, Dakar, Senegal.

12-16 March - Meeting of ad hoc group of ministers of industry for Asia and the Pacific preparatory to UNIDO IV, organized by ESCAP in co-operation with UNIDO, Bangkok, Thailand.

25-30 March - Solidarity Ministerial Meeting for Co-operation in the Industrial Development of the Yemen Arab Republic, Sana, Yemen.

26-28 March - Seventh Conference of African Ministers of Industry preparatory to UNIDO IV, organized jointly by ECA, OAU and UNIDO, place to be determined.

26-29 March - Investment Promotion Meeting for Nepal, Kathmandu, Nepal.

2-6 April - Workshop on tin plate production in the Asian and Pacific Region, Jamshedpur, India.

9-13 April - Investment Promotion Meeting for the Caribbean, Bridgetown, Barbados.

16-20 April - Expert Group Meeting on Quality Control of Pesticides, Bangladesh.

16-20 April - Third Consultation on Leather and the Leather Products Industry, Innsbruck, Austria.

28-30 May - Latin American regional meeting preparatory to UNIDO IV organized by SELA, Havana, Cuba.

5-8 June - Solidarity Meeting of Ministers of Industry for Co-operation in the Industrial Development of Rwanda, Kigali, Rwanda.

25 June - 13 July - United Nations Commission on International Trade Law, 17th session (UN Meeting), New York, USA.

23-27 July - Investment Promotion Meeting, Suva, Fiji.

30 July - 1 August - Interregional Preparatory Meeting for the Fourth General Conference of UNIDO (UN Meeting), Vienna, Austria.

2-18 August - Fourth General Conference of UNIDO (UN Meeting), Vienna, Austria.

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