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ASSISTANCE IN PROMOTION OF FLOWS OF TECHNOLOGY AND INVESTMENT IN THAILAND

SI/THA/82/803

THAILAND

Terminal report*

Prepared for the Government of Thailand
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work of J. M. Caldas-Lima,
Expert in technical transfer and investment

United Nations Industrial Development Organization
Vienna

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1. INTRODUCTION

The Fifth National Economic and Social Development Plan for Thailand 1982-1986, among other policy goals includes the need to establish direct Government role in inflows of technology, taking into account the present country needs, industrial development and its competitive position vis-a-vis other members of ASEAN.

The government in this connection, required high level expertise to be provided for the purpose of assisting in laying ground work for establishment of national technology transfer framework, both legal and administrative.

Such expertise was provided in two split missions of 6 weeks each. The first one was performed by Mr. J. J. Gimaraes Pestana between the 9th August, 1982 and the 17th September, 1982.

The second one was performed by the undersigned Mr. J. M. Caldas Lima between the 7th November 1982 and the 17th December, 1982.

Both experts are since years directors in the Portuguese Foreign Investment Institute, and heads of departments empowered with negotiation, approval and monitoring of transfer of technology agreements. During the period 12-17 December, the mission was joined by Mr. H. A. Janiszewski from UNIDO HQ who participated in the final round of discussions with senior Government officials and co-operated in the formulation of the present report.

It was expected that the experts should carry out the following main duties:

(i) Assess present situation of Thailand in imports of technology;
(ii) Survey current Government set up vis-a-vis location of envisaged Government administrative set-up;
(iii) Prepare suggestions on institutional framework, its scope, functions and organization;
(iv) Survey existing legislative and administrative framework for establishment of a national promotional and regulatory framework.
(v) Carry out consultation programme for the Government officials who will be involved with regulatory measures and provide extensive briefing on regulatory systems in other developing countries.

During the first split mission, and as per the Preliminary Report, Mr. Pestana contacted the main responsible agencies, namely the Ministry of Industry (MOI), the Board of Investment (BOI), the Ministry of Science, Technology and Energy (MSTE), the Bank of Thailand (BOT) and the National Economy and Social Development Board (NESDB).

He also visited several industries and could establish a cooperation scheme between MOI and the Joint Unit CTC/ESCAP for the analysis of transfer of technology agreements for the purpose of the present project.

Such work and the resulting preliminary findings and conclusions, as well as the opportunity of personal exchange of views with Mr. Pestana, were a valuable contribution for the performance of the second split mission concerned mainly with:

- studying in depth the present situation of the inflows of transfer of technology in Thailand, as well as identifying the existing legislation and administrative set-up;
- providing consultation programmes and intensive briefings for government officials and the business community on promotional/regulatory measures in other developing countries;
- prepare a final report setting out the findings of the mission and recommendations to the Government on further action which might be taken.

The present document was designed so as to provide a summary of the mission's findings, conclusions and recommendations.

---

1 Assistance in Promotion of Flows of Technology and Investment in Thailand - Preliminary Report by J.J. Guimaraes Pestana.
A more extensive and detailed report is being prepared, and is intended to give supporting material for implementation of promotional measures related to the inflows of foreign technology as well as detailed assessment of situation in Thailand at present.

2. GUIDELINES FOR POLICY DEVELOPMENT

Like the other members of the Association of Southeast Asian Nations, Thailand's social and economical development has been rising at high growth rates, although it is to be expected to slow down at rates of growth reflecting troubled world economy.

The major source of the country's economic output has been the agriculture, but industry is one of the fastest growing sectors of the economy and is considered to remain the main stimulator of economic growth in a long run.

It should be stressed that the past expansion of the industrial sector is partly due to benefits arising from the government's promotion policy which has given high protection to new industries, and this has resulted in that some of these industries are rather inefficient and internationally uncompetitive.

Furthermore, the structure of most industry is highly dependent on imported raw materials, capital goods, equipment and know-how and energy, resulting in continuously rising trade deficit.

One of the targets of the Fifth National Economic and Social Development Plan is to restructure the industrial sector, with special emphasis on exports in order to lower trade deficit, and to decentralize manufacturing activities from the Bangkok area into provinces.


The present report, preliminary report by Mr. Pestana and extensive report by Mr. Caldas Lima constitute an integral part of project findings for the Government of Thailand.
The major thrust of the Government's policy has been the adoption of a programme of positive promotion of investment in the private sector, both domestic and foreign, by establishing a system of incentives for priority activities, setting up financial institutions to provide capital and loan assistance, establishing industrial estates and reducing or eliminating difficulties and obstacles by a number of legal, administrative and inter-governmental measures.

In this connection, special reference is made in the Fifth Plan to the creation of an agency for the promotion, selection and supervision of investment, trade, technology transfer and registration of all foreign investment.

Reference is also made in the Plan to science and technology as an important factor in the production process and it is recognized that it is essential to accelerate the use of science and technology in the improvement of efficiency throughout the spectrum of production and utilization of natural resources in order to raise productivity in the agricultural, industrial and energy sectors.

3. THE SITUATION IN RESPECT TO IMPORTED TECHNOLOGY

3.1 Direct cost

When regarding the Fifth National Economic and Social Development Plan we can notice that the Government is aware and sensitive to the following major issues:

- most of the technology applied in the manufacturing sector is imported from abroad and usually does not achieve highest efficiency because it is treated by the suppliers as trade secret, which means that know-how often is not fully disclosed by the suppliers in order to prevent importing corporation from firstly full absorption of technology and secondly prevent direct competition
- the imported technology has not been sufficiently screened, is highly expensive and has many restrictive conditions
creating economical disadvantages (particularly in area of trade balance and exports).

- the technology received is also not so effectively used as it should be, mainly because industrialists have obtained high protection against imported products and did not care about raising production efficiency.

The fact that imported technology, in addition to being inefficient is highly expensive, can be demonstrated through the results of an in depth study about the inflows of technology in Thailand carried out by Joint CTC/ESCAP Unit on TCNs.

From that study, made available to the mission, we can observe that in Thailand the payments for imported technology has increased ninefold from Baht 142 million in 1972 to Baht 1,330.7 million in 1981.

From the same study we can conclude as fellows:
- the largest payers are found in the non-promoted sectors;
- a large proportion of payments is concentrated in simple industries such as pharmaceuticals and cosmetics which involve mainly mixing operations (without transfer of know-how).

We can also come to interesting conclusions about inflows of technology in Thailand through the ratio Payments for Technology vs Gross National Product, which has proved to be a relevant indicator to compare the relative costs of technology in different countries.

---

1/ Cost of Technology and Restrictive Business Practices : A case Study of Thailand. The Joint CTC/ESCAP Unit kindly agreed to provide its information for the purpose of this report.
A recent study on this subject and elaboration on data from Joint Unit Study, permitted to establish the table 1 for a selected number of countries. It is to be noted that the ratios were calculated taking the payments for technology of year n and GNP in year n - 1, and this because payments of royalties are usually made on an yearly basis and in the year after the corresponding output has been generated.

Table 1 Payments for Technology vs GNP
(Figures are multiplied by 1,000)

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>Payments 1979 GNP 1978</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>0.29</td>
</tr>
<tr>
<td>Japan</td>
<td>1.04</td>
</tr>
<tr>
<td>F.R. Germany</td>
<td>1.52</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1.93</td>
</tr>
<tr>
<td>France</td>
<td>1.99</td>
</tr>
<tr>
<td>Italy</td>
<td>2.00</td>
</tr>
<tr>
<td>Rep. of Korea</td>
<td>2.34 (1980/1979)</td>
</tr>
<tr>
<td>Sweden</td>
<td>2.37 (1978/1977)</td>
</tr>
<tr>
<td>Philippines</td>
<td>2.42 (1980/1979)</td>
</tr>
<tr>
<td>Spain</td>
<td>2.56 (1978/1977)</td>
</tr>
<tr>
<td>Portugal</td>
<td>2.58</td>
</tr>
<tr>
<td>Thailand</td>
<td>3.36 (1980/1979)</td>
</tr>
</tbody>
</table>

The figures of table 1 are almost self-explanatory:
- countries with lower indicator are those more advanced technologically;
- for countries where transfer of technology is regulated, namely Spain, Portugal, Philippines and Republic of Korea, the ratios are comparable,
- for Thailand, where transfer of technology has not been regulated so far, the ratio is significantly higher.

1/ Import of Technology and Technological Policy, by Vitor Cerado Simoes.
2/ See Final Report
With the data available, we could establish table 2.

**Table 2**: Payments for Technology vs GNP

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippines</td>
<td>2.1</td>
<td>2</td>
<td>---</td>
</tr>
<tr>
<td>Thailand</td>
<td>3.36</td>
<td>3.72</td>
<td></td>
</tr>
<tr>
<td>Rep. of Korea</td>
<td>2.34</td>
<td>1.91</td>
<td></td>
</tr>
</tbody>
</table>

- For the Republic of Korea the ratio is decreasing and this fact can be well understood when considering that the country has had a steady development growth rate and is becoming less dependent on foreign technology due to regulatory measures introduced as early as 1965.

- For Thailand the ratio increased significantly from 1980 to 1981, which means that the imported technology is becoming more and more expensive.

If we take the ratio of Payments for Technology vs Industrial Output, the figures are still more unfavourable for Thailand, as per table 3 comparing such ratio for Philippines, Portugal, Republic of Korea and Thailand.

**Table 3**: Payments for Technology vs Industrial Output

(figures are multiplied by 1,000)

<table>
<thead>
<tr>
<th>Country</th>
<th>Payments 1980 IO 1979</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippines</td>
<td>8.0</td>
</tr>
<tr>
<td>Thailand</td>
<td>14.6</td>
</tr>
<tr>
<td>Rep. of Korea</td>
<td>6.7</td>
</tr>
<tr>
<td>Portugal</td>
<td>6.4</td>
</tr>
</tbody>
</table>
The above figures show that Thailand's industry is paying a comparatively much higher price than the industry of other industrializing countries where the transfer of technology is subject to regulation and Government. This is not surprising as we find in several fields royalty levels higher than 10% and even cases of royalties as high as 20% on gross sales and 28% on net sales.

3.2 Indirect cost

Technology is costly not only on account of high direct payments. As pointed out in Joint Unit Study and other materials the technology fees should not be viewed neither apart from the duration of the contract, nor from restrictive or tie-in conditions which represent indirect costs, normally much higher than those represented by the running royalties.

Beyond a clear indication about type, form and amount of payments to be made by the recipient, a transfer of technology agreement should contain:
- a detailed description of the nature of the transfer and of the practical form it will take;
- an indication of the period for which the agreement is to remain in force.

When a balanced relationship exists between licensor and licensee, such period rarely exceeds 10 years.

In the case of Thailand, about 50% of the existing agreements stipulate longer durations than 10 years, or are open-ended and only about 30% stipulate less than ten years of duration; but within this number there are many cases where the automatic renewal is foreseen and the recipient is prohibited to use the know-how upon the expiration of the agreement; only in one agreement a provision exists allowing the recipient to use the know-how upon expiration date of the contract.
Other restrictive conditions to be found in the agreements are, export ban and tied purchases of machinery and raw materials, but even more important and relevant as the restrictive conditions is the fact that there are agreements which do not clearly specify the type of product and services rendered.

Although a further study is necessary, mainly in what concerns transfer pricing when buyer/seller equity relationship exists, the above data and considerations are quite sufficient to realize that the foreign technology is supplied to Thailand at very high prices when compared with those observed in other countries, and with conditions that, contrary to normal international fair practices, are not compatible with the need for technological development. Neither is it possible, in such conditions, to improve production efficiency, promote exports and be competitive at the international export markets.

3.3 Foreign technology and foreign investment

The mission found that there is a strong relationship between foreign investment and foreign inflows of technology, as clearly shown in table 4 relating a sample of 343 agreements that gave rise to payments in 1980 and/or 1981, and the foreign share on the recipient’s assets, as well as the promotional status of the projects related to the agreements. It can be seen, as previously pointed out, that the largest payments are found in the non promoted sector and made by firms where foreign participation is predominant.

On the other hand, we can see in table 5 that the total remittances of management fees, copyright and patent royalties has been increasing faster than the remittances of profits and dividends, and the respective ratio had a steady increase from 0.22 in 1976 to 0.46 in 1980.
<table>
<thead>
<tr>
<th>FOREIGN SHARE IN LICENSEE'S ASSETS</th>
<th>NR OF AGREEMENTS</th>
<th>TOTAL</th>
<th>PAYMENTS 1981</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PROMOTED</td>
<td>NON PROMOTED</td>
<td>PROMOTED (000 Bht.)</td>
<td>NON PROMOTED (000 Bht.)</td>
</tr>
<tr>
<td>0</td>
<td>29</td>
<td>29</td>
<td>58</td>
<td>86,558</td>
</tr>
<tr>
<td>1 - 25</td>
<td>23</td>
<td>12</td>
<td>35</td>
<td>55,200</td>
</tr>
<tr>
<td>26 - 49</td>
<td>64</td>
<td>49</td>
<td>113</td>
<td>197,266</td>
</tr>
<tr>
<td>50</td>
<td>15</td>
<td>9</td>
<td>24</td>
<td>11,611</td>
</tr>
<tr>
<td>51 - 75</td>
<td>13</td>
<td>13</td>
<td>26</td>
<td>130,594</td>
</tr>
<tr>
<td>76 - 90</td>
<td>10</td>
<td>5</td>
<td>15</td>
<td>55,704</td>
</tr>
<tr>
<td>91 - 99</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>1,582</td>
</tr>
<tr>
<td>100</td>
<td>34</td>
<td>33</td>
<td>67</td>
<td>131,632</td>
</tr>
<tr>
<td>TOTAL</td>
<td>190</td>
<td>153</td>
<td>343</td>
<td>670,147</td>
</tr>
</tbody>
</table>

The 343 agreements in the table are responsible for 97% of total remittances in 1981.
Table 1: Payments for technology vs remittances of profits and dividends (million baht)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total remittances of technology fees</td>
<td>360.20</td>
<td>504.72</td>
<td>544.70</td>
<td>717.17</td>
<td>936.95</td>
</tr>
<tr>
<td>2. Remittances of profits and dividends</td>
<td>1,612.70</td>
<td>1,635.30</td>
<td>1,660.70</td>
<td>1,971.70</td>
<td>2,049.10</td>
</tr>
<tr>
<td>Ratio 2/1</td>
<td>0.22</td>
<td>0.31</td>
<td>0.33</td>
<td>0.36</td>
<td>0.46</td>
</tr>
</tbody>
</table>

Although this is a matter requiring further investigation, the figures of table 5 may be an indication that foreign firms take advantage in overvaluation of transfer of technology agreements with Thai subsidiaries in order to remit profit abroad at a lower tax level.

This kind of tendency had been also detected in other countries, and even in free economy areas; in the European Common Market, the authorities are paying increasing attention to remittances for technology (normally subject to lower taxes than profits) when equity relationship exists between supplier and recipient of technology, in order to avoid fiscal evasion this way.

4. THE NEED FOR PROMOTION AND REGULATION

The case of Thailand regarding the transfer of technology issues is not very different from the situation in other countries before regulations have been effected.

The increasing consciousness that technology is a key factor for development, and steady growth of the international technological exchanges lead many countries to create legislations to regulate the inflows of technology and foreign investment as an instrument to achieve the goals of their economical policies.

In Thailand the need for regulation had been felt especially since the publication of the Fifth Plan, and a number of organizations
have been stepping up interest in, and action concerning, transfer of technology, namely BOI, MOI, MSTE and NESDB.

Apparently there are overlapping claims of responsibility, but no practical experience exists in monitoring the inflows of technology, increasingly necessary for the development of the country, neither any significant cooperation or coordination was detected among above mentioned organizations.

Efforts are envisaged to devise a technological development policy, including a comprehensive system for the appropriate acquisition, digestion, adaptation and dissemination of imported technologies, as well as improvement of the local capabilities.

This is a task for a long term process, involving the strengthening of technological capacity and making education and R&D activities more responsive to the needs of the country. Such task is far too complex to become the exclusive domain of a single institution, and the development of appropriate infrastructure should include the recognition of the different types of institutional functions to be performed, and the establishment of appropriate cooperative network among the several responsible bodies so that they can work together in the same direction.

It should also be recognized that the development process, like in other developing countries, is dependent on inflows of foreign technology and such inflows happen mostly through direct foreign investment or through contractual arrangements between foreign suppliers and private domestic firms whose interests are not always coincidental to the Government's objectives.

Therefore, it seems necessary and urgent to create promotional and regulatory mechanisms allowing the Government to monitor the transfer of technology agreements, and take advantage of such capacity to provide for
- the transfer of technology prices and conditions reflect normal international practices;
- conditions for the absorption of know-how are granted;
- the domestic scientific and technological capacity is protected and strengthened;
- balance of trade is improved;
- bargaining and negotiating capabilities of local industry are radically improved.

5. CONCERNS ABOUT REGULATION

As a rule, the mission found a strong promotional attitude in the Government officials contacted and it is known that efforts are being made to simplify the complicated bureaucratic mechanisms and to encourage more initiative by the investors. It seems that Government is hesitant in introducing additional regulatory measures, although often found as necessary, as they appear a possible source of encouragement to foreign suppliers of technology; on the other hand, the business community is sensitive to the weak negotiating capabilities of domestic firms due to lack of information about alternative suppliers and normal international practices; it is also feared that regulation might create additional difficulties. Besides, business people are sceptical about the possibility of getting efficient back-up and assistance from Government agencies in negotiating technology with foreign parties.

In this connection the mission's comments are as follows:

a) regulating or monitoring the inflows of technology must not be viewed neither as discouraging the activity of foreign firms in the country, nor as being against promotion, provided that regulatory mechanisms are designed to achieve fair negotiating practices, instead of empowering the regulatory agency to chose the technologies to be imported or interfere with the technological options of the entrepreneurs;
b) it is to be noted that not only in developing countries the transfer of technology is subjected to regulation; also in developed countries, namely in the United States, in Japan and in the European Common Market there are regulations forbidding restrictive conditions, abuse of dominant position and unfair trade practices. Table 6 shows the similarities in the interpretation of the most obvious restrictive business practices in several countries, both developed and developing ones.

c) ultimately, and even putting ourselves in an extreme liberal approach, regulating the inflows of technology would result in the creation of a channel between the foreign suppliers and the domestic recipients, with the immediate advantage of giving the Government information about:

- the nature of the technology inflows;
- alternative sources of technology;
- sectors for which the imported technology is intended;
- identification of sectorial needs and adoption of corresponding promotional measures.

However, the mission considers, as per the concerns of both Government officials contacted and business community, that regulating or monitoring transfer of technology should be imposed by skilled people well acquainted with engineering and business matters and with a broad understanding of what transfer of technology agreements actually mean, and how to take advantage of monitoring in order to assist, if necessary, the domestic firms in negotiating better conditions, according to normal international practices.

Such staff should also be capable to conduct an efficient and active dialogue with the foreign entrepreneurs in order to make them know the country's objectives and policies, and achieve suitable, mutually advantageous compromises.
<table>
<thead>
<tr>
<th>Type of restrictive provisions</th>
<th>US</th>
<th>COLOMBIA</th>
<th>MEXICO</th>
<th>PHILIPPINES</th>
<th>JAPAN</th>
<th>PORTUGAL</th>
<th>SPAIN</th>
<th>EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIE - IN</td>
<td>illegal &quot;per se&quot;</td>
<td>illegal</td>
<td>illegal</td>
<td>illegal (exceptions possible)</td>
<td>illegal</td>
<td>illegal</td>
<td>illegal</td>
<td>illegal in princ.</td>
</tr>
<tr>
<td>Restriction on licen-cee's right to deal in Competitors' Product (TIE - OUT)</td>
<td>illegal &quot;per se&quot;</td>
<td>illegal</td>
<td>illegal</td>
<td>illegal</td>
<td>illegal (with exceptions)</td>
<td>not mentioned specific.</td>
<td>illegal</td>
<td>illegal</td>
</tr>
<tr>
<td>Mandatory package licensing</td>
<td>illegal in princ.</td>
<td>not ment. spec.</td>
<td>not ment. spec.</td>
<td>not ment. spec.</td>
<td>not ment. spec.</td>
<td>not ment. spec.</td>
<td>not ment. spec.</td>
<td>illegal</td>
</tr>
<tr>
<td>Post expiration royalties (patent + licence)</td>
<td>illegal &quot;per se&quot;</td>
<td>illegal</td>
<td>illegal</td>
<td>illegal</td>
<td>not ment. spec.</td>
<td>not ment. spec.</td>
<td>not ment. spec.</td>
<td>illegal</td>
</tr>
<tr>
<td>Price fixing restrictions</td>
<td>virtually illegal &quot;per se&quot;</td>
<td>illegal</td>
<td>illegal</td>
<td>not ment. spec.</td>
<td>illegal</td>
<td>illegal</td>
<td>illegal</td>
<td>illegal</td>
</tr>
<tr>
<td>Quantity of volume restrictions</td>
<td>US Dept. Justice illegal &quot;per se&quot;</td>
<td>illegal</td>
<td>illegal</td>
<td>illegal</td>
<td>not ment. spec.</td>
<td>illegal</td>
<td>illegal</td>
<td>not ment. spec.</td>
</tr>
<tr>
<td>Territorial restrictions</td>
<td>determined by rule of reason</td>
<td>illegal (exceptions possible)</td>
<td>illegal (exceptions possible)</td>
<td>illegal (exceptions possible)</td>
<td>may be declared illegal</td>
<td>illegal</td>
<td>illegal</td>
<td>illegal in princ.</td>
</tr>
</tbody>
</table>

Source: National Legislation of Selected Developing Countries; National Approaches for the Acquisition of Technology - ID/187
Foreign firms, when investing or doing business abroad, are prepared to meet and comply with regulatory measures and to face negotiations with the authorities, and surprisingly lack of regulation enhances often unfair practices and deals as above referred to.

6. CONCLUDING REMARKS AND RECOMMENDATIONS

The study of the existing transfer of technology agreements in Thailand strongly suggests the need of creating regulatory mechanisms; moreover the setting-up of an agency for registration of foreign investment and transfer of technology is envisaged in the Fifth Plan.

Among other advantages, the establishment of such monitoring activity would result in:

a) providing for fair negotiating conditions, with direct beneficial effects on the foreign exchange balance, on the conditions for the assimilation of technology and on the competitiveness of Thai industry (both externally and internally);

b) giving the Government information about supply conditions from different sources and for different sectors, for the benefit of domestic business community;

c) identifying the technological gaps and permitting to provide means to bridge those gaps;

d) conducting continuous sector based analysis of registered agreements in order to establish long-term trends in relation to prices, royalties and technological developments;

e) development of linkages with national and international information systems containing information on sources of technologies and the dissemination of such data to the domestic firms, including the possibility of using experience of other developing countries, by access to TIES system 1/.

1/ TIES - Technological Information Exchange System operated by UNIDO provides exchange of information on terms and conditions of technology agreements among member countries; Thailand has at present observer status in TIES.
establishment of close relationship between regulatory agency, policy making institutions, research and development facilities and domestic business community to ensure that the operations of such R+D facilities become more directly related to domestic technological needs.

The question of regulating transfer of technology, as well as foreign investment, requires specific skills and justifies the creation of a specialized agency for that purpose.

However, taking into account the realities of the country, the mission feels that, for the time being, there is no room to set up a new independent institution, and that advantage should be taken of the existing infrastructure to locate the regulatory agency and to define:

a) the role of the already existing organizations in the development process, according to their own vocation and capabilities;

b) the network of linkages between the regulatory agency and the other organizations, so that monitoring of technology inflows comply with the Government strategy and result in the development and the mobilization of national problem-solving capacities.

The mission detected that among the existing organizations, only the Bank of Thailand and the Board of Investment have dealt with transfer of technology agreements, although without making much of appraisal or evaluation.

As a matter of fact, the Bank of Thailand requests for submission of the agreements as an internal administrative measure with the sole purpose of checking the compliance of remittances with the agreed contractual conditions; the Board of Investment is already entitled to request submission of the transfer of technology agreements associated with promoted investment and is also entitled, according to the Investment Promotion Act, to grant remittances on payments arising out from such agreements.

Therefore those two organizations are the most suitable to start with operational action, but it is felt that in view of its
character the Bank of Thailand does not favour the location of the regulatory agency within its organization.

As the lack of field experience about the realities associated to the transfer of technology agreements has been a source of misunderstanding and fears that interfering in the agreements would have a negative effect on prospective investors, the mission is of the view that two alternatives should be considered by the Government:

One alternative consists of creating appropriate regulatory mechanisms by issuing a law regarding transfer of technology (and if necessary affecting foreign investment) and setting up a regulatory agency within the Board of Investment; it is also possible to consider creation of a non profit organization attached to BOI but with a special status namely for the purpose of granting the staff a suitable and motivating salary level and high level of professional expertise. Such agency should be empowered as the competent authority to appraise the technology agreements (and possibly direct foreign investment) and subject its approval and registration in compliance with the provisions of the proposed law above.

The other possible alternative would consist of an interim solution designed to provide practical knowledge on the transfer of technology issues, enabling Thai officials to design appropriate future regulations (if deemed necessary).

In this connection, the mission makes the following recommendations:

1. A Technical Secretariat should be created within or attached to the Board of Investment for the purpose of collecting and registering all existing transfer of technology agreements and all new transfer of technology agreements, as a condition for such agreements to become legally enforced, namely for the purpose of remittances abroad. We believe that 5 or 6 professionals are enough to start work of the Technical Secretariat.

2. Registration of already existing agreements should be made in a very flexible way and without any special interference from the Secretariat, but it should provide for the opportunity of dialogue and exchange of views with the business community and learning about
their feeling concerning results of relationship with the foreign counterparts.

However, in cases where the duration of the agreements is open-ended (or, for instance, when the agreement is lasting for more than 10 years) registration should depend on agreement of both parties as to the establishment of a time period considered as suitable by the Secretariat.

3. New contracts should be subjected to evaluation by the Secretariat who would prepare recommendations to be submitted to recipient local company; consultative body composed of senior representatives of BOI, MOI, MSTE, MOT and MOC may also be established to provide broader forum for interministerial discussions of problems associated with transfer of technology.

Eventually the Secretariat could report to the Restructuring Committee itself. The Secretariat recommendations should be based on the appraisal of the agreements and be transmitted to the parties (normally to the Thai firm) for voluntary action, deemed as appropriate and convenient.

4. During the course of action, the Secretariat would take advantage of the evaluation activity to get first hand knowledge and experience about the agreements, to collect information, to train the staff and get used to establish links (when recognized as convenient) with other institutions connected with development and promotional policies, as well as to identify the domestic existing capabilities related to the contractual matters.

The secretariat should also become a member of TIES system as a way to get information about conditions in other countries, thus providing assistance and guidance to domestic firms.

5. The Secretariat should be given a limited period of time to issue recommendations (maximum 90 days) from the date of application for registration and should be assigned the task of:
- within 6 to 9 months after starting activity, to issue guidelines for evaluation of the agreements, according to the sectors;
- within 12 to 18 months review its activity and propose final decisions in respect to regulatory activities (if any).

In either alternative, the rules should apply to all agreements, either in promoted or in non promoted sectors, and also when the recepients are associate companies, branches or any form of representation of foreign companies.

Definition of transfer of technology agreements should cover all acts or contracts through which recipients seek granting of rights or assistance related to their entrepreneurial activities, namely:

- use of patents, know-how and trademarks;
- engineering agreements;
- management services;
- franchise
- supply of computer software;
- consultancy
- other forms of technical assistance.

Transactions within the country, i.e., when the supplier is a subsidiary of a foreign firm, should also be subject of registration.

UNIDO may assist in setting up legal and administrative framework to start with the regulatory activity or, should the creation of a Secretariat be the option, to provide follow-up covering the following areas:

- Training of the staff in contract evaluation and analysis;
- Assistance in developing guidelines according to sectors or nature of the agreements;
- Assistance in reviewing the Secretariat activities and
proposals, namely in what concerns setting up final legislative and administrative framework.

Suggestions for details of operational action are given in the detailed report but, as a final remark, the mission would like to stress that the Technical Secretariat should be composed by competent people with a great deal of common sense and a high moral and professional standard; and the person to be chosen as the head of the Secretariat should have some past experience both in engineering and licensing activities.