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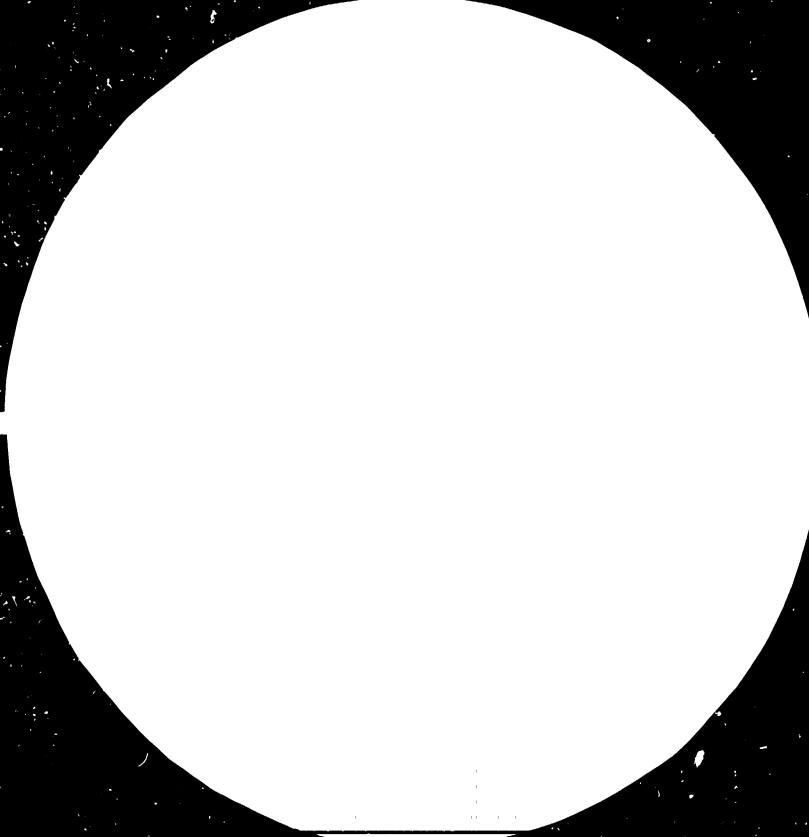
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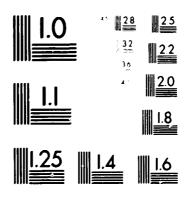
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FOLLOW-UP ON INDUSTRIAL JOINT VENTURE PROJECTS

IN

SELECTED DEVELOPING COUNTRIES . PHASE I

Terminal Report prepared by

Armo Maneck Consultant

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Terms of Reference for Phase I

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I

II

SYNOPSIS

The principal aim of the desk study undertaken by the consultant was to follow up on selected joint venture projects and other long-term agreements originating from the UNIDO Investment Promotion Services, Investment Promotion Meetings or direct contacts and which were reported as having been concluded.

Investment Co-operative Programme Industrial Investment Projects (in Selected Countries)

Country	Reported Concluded by Investment Promotion Services	Presented at Investment Promotion Meetings	Total
Kenya	7	26	33
Swaziland	2	5	7
United Republic of Tanzania	2	15	17
2 ambia	1	33	34
Sri Lanka	27	46	73
Malaysia	4	5	9
Total			173

The consultant was requested to investigate, inter alia, what support services had been made available to such projects by the governments concerned, by UNIDO or by other parties. Because the quarterly or individual reports emanating from the Investment Promotion Services on their concluded projects provide such information to a limited extent only, the consultant encountered major difficulties in fulfilling this task. With respect to point 1. (e) through (g), due to the lack of information available from the records, further study has to be left to field work during Phase II of the follow-up on industrial joint venture projects. Further, because UNIDO's records contain only a minimum of follow-up information on studies, the consultant was faced with constraints in his assessment of 2. (a) through (d) of the Terms of Reference. Field work will be required so as to be able to provide the necessary data in this respect. The names of former officials in charge of the various projects (see footnotes to part III. of this report) may be of assistance, although the consultant is aware that in the meantime such personnel may have been re-assigned.

Number of Pre-Investment Stud	ies Suitable for
Joint Venture Industries	(by Country)
Kenya	45
Swaziland	8
United Republic of Tanzania	40
Zambia	10
Sri Lanka	12
Malaysia	19

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It would also have been of interest to analyze a number of operational joint venture industries in developing countries in which UNIDO had not been involved. Unfortunately, relevant information about such projects could not be located at UNIDO headquarters. Provided interest in such a survey exists, the consultant has added this task in his draft Terms of Reference for Phase II.

Because of pressure of time, the consultant selected certain countries in which UNIDO had undertaken major investment or pre-investment study programmes. These countries include Kenya, Swaziland, United Republic of Tanzania and Zambia in Africa, and Sri Lanka and Malaysia in Asia. These latter two Asian countries may be covered by a subsequent Phase III, based on experience of the African countries.

I. INDUSTRIAL INVESTMENT PROJECTS REPORTED CONCLUDED (BY COUNTRY AND BY INVESTMENT PROMOTION SERVICE CONCERNED)

1. KENYA

- Brussels
- 1.1. Asbestos Cement Pipe and Roof Sheets Production. Sponsored by Kenya Asbestos Cement Ltd. in co-operation with Eternit-Eterontremer (Belgium) and its United Kingdom subsidiary. Total investment: US\$ 1.2 million.
- 1.2. Fertilizer Formulation and Mixing Plant.

 Sponsored by National Agricultural Chemicals and
 Fertilizer Ltd. Stamicarbon (Netherlands) was the
 foreign partner. The project was part of the prefeasibility study for nitrogenous fertilizer (see
 III.1.2.).
 Estimated total investment: US\$ 2.5 million.
- Dunlop Tyre Plant.
 No further information available.
- 1.4. Leather Industry of Kenya. Partners were Industrial Promotion Service (Kenya) and Union des Tammeries de Malmedy (Belgium) and certain banks. The project was part of the study listed under III.1.8.
- Cologne 1.5. Kenya Glass Industries Ltd.

 Foreign partners envisaged were Heye Glass, Winkler
 Glass and Deutsche Entwicklungsgesellschaft (Federal
 Republic of Germany).
- New York 1.6. Mosquito Coils.

 No further information available.
- Zurich 1.7. Cassava Chips and Pellets.

 The project originated from the Industrial Survey and Promotion Centre (UNIDO-assisted). It is a Government enterprise operated in co-operation with Buehler (Switzerland).

 Total investment: US\$ 1 million.

2. SWAZILAND

Cologne

2.1. Mar.ufacture of Brake and Clutch Linings. Sponsored by Swaziland National Development Corporation. Foreign partners were Beral Brake and Clutch Linings and Deutsche Entwicklungsgesellschaft (Federal Republic of Germany). The products are sold locally and to neighbouring countries. Total investment: US\$ 4.6 million. Two (non-UNIX) studies - one on raw materials and the other a market study - were made available to the two partners in the Federal Republic of Germany. In order to ensure the proper operation of the plant, the Cologne Investment Promotion Service drafted a technical assistance request for management expertise and training of local staff, which was approved by the Government and submitted by the Resident Representative. Programming Committee approved the project for financing from the Special Purpose Contribution of the Federal Republic of Germany. However, the project encountered administrative obstacles and no funds were released.

2.2. Household Candles Manufacture.

Sponsored by REDCO in co-operation with a partner from the Federal Republic of Germany.

Total investment: US\$ 200,000.

3. UNITED REPUBLIC OF TANZANIA

Cologne 3.1. Production of Toothpaste.

Joint venture with local sponsor and
Blendax Werke, Mainz (Federal Republic of
Germany). Production of toothpaste and
tooth-brushes in Arusha for the local
market and for export, especially to
Arab countries.

3.2. Production of Parquet Floorings from Tropical
Woods (Muhuhu Wood, Mninga, Mruho and Panga Panga);
Partners were Tanzania Wood Industries Corporation
(TWICO) and Interfloorings, Hamburg (Federal
Republic of Germany).

4. ZAMBIA

Cologne 4.1. Processing and Conservation of Mushrooms for Export.

Sponsored by Rural Development Company (RUCOM) with

Seuss (Federal Republic of Germany). The Cologne

Investment Promotion Service assisted the German

partner both in Cologne and in a visit to Zambia.

5. SRI LANKA

Brussels

- 5.1. Solid Tyre and Rubber Master Batches. Sponsored by Berguguan Lanka Ltd. in co-operation with Kleber-Colombes (Belgium). Production of various rubber articles. Total investment: US\$ 4.0 million.
- 5.2. Ceylon Synthetic Textile Mill.
 Private company operated in co-operation with Picanol (Netherlands) and a Belgian partner.
 Total investment: US\$ 8.0 million.
- Penewable Energy Equipment.
 No further information available.
- 5.4. Leather Work Gloves

 Sponsored by local partner in co-operation with
 P.J. van Heerwijk (Netherlands).
- Trimmings.
 No further information available.
- 5.6. Rubber Industry.

 Based on recommendations of studies listed under
 III.5.8. and III.5.10.

Cologne

5.7. Manufacture of Rubber Components.

Sponsored by local partner in co-operation with

Gummiwerke Bredenscheid (Federal Republic of Germany).

Production of rubber parts for the automobile industry
for export. Based on recommendations of studies listed
under III.5.8. and III.5.10.

Total investment: US\$ 2.5 million.

New York

- Terry Fabric Weaving.
 No further information available.
- 5.9. Building of Trawlers.

 Sponsored by local partner in co-operation with Francic Ottaway Inc. (United States).

 Total investment: US\$ 1.3 million.
- 5.10. Sea-food Processing.

 Sponsored by private partner in co-operation with
 Fremont Fisheries (United States).

 Total investment: USS 1.5 million.

Food Processing Plant.
 No further information available.

5.12. Gem Cutting.

Local partner in co-operation with Dakota Lapidern

Gem Cutting (United States).

Total investment: US\$ 300,000.

5.13. Sportswear Production.
Sponsored by local partner and South Sportswear (United States).
Estimated total investment: US\$ 300,000.

5.14. Garment Production.

Local investor in co-operation with Jagualanka
Garments (United States).

Total investment: US\$ 200,000.

5.15. Garment Production.

Local investor in co-operation with Star Garments (United States).

Estimated total investment: US\$ 400,000.

5.16. Electronic Components Manufacture.

Local partner in co-operation with Harris Electronics

(United States).

Total investment: US\$ 25 million.

Tokyo 5.17. Ship Breaking)

5.18. Coconut Fibre Processing) No further

5.19. Buddhist Altars) information received, despite cabled request.

5.20. Raw Materials Processing)

5.21. Computer Software)

Zurich 5.22. Mini Sugar Plant.

No further information available.

5.23. Tea Packaging Plant.

Local partner in co-operation with Model S.A.

(Switzerland).

Estimated total investment: US\$ 3.7 million.

5.24. Music Boxes Manufacture.

Sponsored by Musico with Swiss partner.

Total investment: US\$ 1.2 million.

Cashew Nut Processing.
 No further information available.

5.26. Essential Oil Extraction.No further information available.

Vienna 5.27. Rubber Gloves Production.

No further information available.

6. MALAYSIA

Cologne 6.1. Tyre Retreading and Rubber Mounting.

Sponsored by Perek State Development Corporation in co-operation with Gummi Metall Technik, Buehl (Federal Republic of Germany).

Total investment: US\$ 2.3 million.

New York 6.2. Manufacture of Batteries.

No further information available.

Zurich 6.3. Forging Plant.

Sponsored by Malaysian Investment Centre in co-operation with FDC (Switzerland).

Total investment: US\$ 2.3 million.

Vienna 6.4. Electric Typewriter Cassettes.

No further information available.

II. INDUSTRIAL INVESTMENT PROJECTS PRESENTED AT INVESTMENT PROMOTION MEETINGS

1. UNIDO/FAO Joint Meeting to Promote Investment in Selected Food Processing Industries (Amsterdam, 1974)

Malaysia

Project Title	Annual Capacity (tons)	Total Investment (US\$ million)	Proponent
Palm oil processing	30,000	2.7	Perak State Corp.
Sugar Refinery	12,320	13.6	Perak State Corp.
Edible Oil Products	59,000	2.5	Hume Industries
Palm Kernel Processing	17,700	2.6	Miniyak Berjaja Sendirian
Fractionation of Palm Oil	28,950	2.4	Kepong Berhad

2. UNIDO Investment Promotion Meeting for Sri Lanka (Colombo, October 1981)

Project Title

Fruit canning factory	Manufacture of instant tea
Manufacture of tea bags	Baby food
Production of coir mats	Coir rugs matting and carpets
Coir yarn	Tannery
Leather products	Footwear
Rubber-soled shoes	Dye plant
Timber processing	Straw board
Suitcase ca.dboard	Printing of paper-board cartons
Activated carbon production	Minerals development
Manufacture of oleoresins	Fuel logs from agro-waste
Manufacture of rubber tyres	Production of rubber gloves
Manufacture of moulded rubber	Rubber sheeting
Rubber floor tiles	Rubber-based products
Manufacture of PVC pipes	Water filters
Activated carbon	Furfural production
Essential oils	Concrete pipes
Sanitary ware	Porcelain tableware
Porcelain insulators	Aluminium doors
Handtools	Hinges and window fittings

Capacitors and resistors

Electrical components

Integrated circuits

Electrodes and carbon brushes

Fibreglass boats

Jewellerv

Diamond cutting

Gem cutting lapidary

3. Industrial Investment Seminar sponsored by the Tokyo Investment Promotion Service (Tokyo, April 1983)

Project Title

Kenya

Castor oil production

Pineapple and citrus fruit processing

Production of alcohol from cassava

Paper production

Integrated iron and steel mill

Machine tools production

Mathematical instruments

Precision grey iron foundry

Forge shop

Tin plate

Dry cell batteries

Activated carbon production

Felt pens

Silver recovery from photographic

X-ray waste

Electric carbon brushes

Caustic soda

Carbon black

Basic pesticides

Production of barytes

Processing of diatomite

Brick and tile manufacture

Telecommunication equipment

Loudspeakers production

Blanket weft yarn manufacture

Coils and transformers for radios

Printed circuit board manufacture

and TV-sets

4. UNIDO Regional Investment Promotion Meeting for Southern African Countries (Lusaka, 1984)

Project Title

Swaziland

Vegetable dehydration plant

Tobacco processing plant

Ceramic tableware

Foundry industry

United Republic of Tanzania

Sugar cubes

Starch glucose

Baker's/fodder yeast

Lager-type beer brewery

Mineral water

Diversification of textile plant

Integration of spinning mill

Extension of CIC textile mill

Furniture industry establishment

Tissue paper

Gum resin

Calcium carbonate

Metal caps

Expansion of tool room

Modernization of textile Tanga

Zambia

Mongu timber project Mumpilo quail Maize oil production Alpha rolling mills Industrial and potable alcohol Spinning mill Expansion of Zambezi paper mill Pulp and paper plant Nitrogen chemicals Salt production Drugs manufacture Plastics factory extension Brass products manufacture Copper wire manufacture Steel wire plant Transformer factory Manufacture of lead pencils

Crushed stones Mwinilunga cannery Milling plants Cassava starch and pellets Wine production Kenaf/jute sack making Garment manufacture Photo-type-setting Pharmaceutical plant Extension of Moore pottery Rubber reclamation plant Glass sheet plant Agricultural lime Kabwe die-casting works Irrigation equipment Manufacture of motor-car filters

III. PRE-FEASIBILITY OR OTHER PRE-INVESTMENT STUDIES EXECUTED BY UNIDO

In the following listing of studies, by country, unless otherwise indicated, the numbers following each listing refer to the UNIDO Registry file number or, if six-digit, to the computer record number in the VIC Joint Library. The footnotes indicate the officer in charge of the project at the Ministry of Industry (Kenya, Swaziland, Zambia) or the former counterpart director of INDCENTRE (United Republic of Tanzania). In the case of Sri Lanka, the official was attached to the Department of External Resources.

1. KENYA

From 1970 through 1980, the Industrial Survey and Promotion Centre, financed from UNDP funds and executed by UNIDO, was the main source for pre-feasibility and other pre-investment studies. At times, it employed up to 14 experts and consultants concurrently.

- 1.1. Pre-feasibility Study for Development of a Charcoal Industry, 1973.

 Prepared by Messrs. E.C. Collins and R. Faust, who submitted a

 final report with drawings for a prototype kiln. Prototype

 equipment was subsequently built by Mr. Faust.*

 (OA 220 KEN 11)
- 1.2. Pre-feasibility Study for Nitrogenous Fertilizer. (1974)

 In view of delays in implementation, the project was handled by
 a bilateral Italian team. The Tennessee Valley Authority was
 foreseen as a joint venture partner.*

 (OA 220 KEN 12)
- 1.3. (a) Mr. G. Lanzler, expert attached to the Industrial Survey
 Project, in 1969 prepared a pre-feasibility study for a
 bicycle factory with a capacity of 30,000 units per year.
 - (b) He also studied the production of bandsaws and pangas in a joint venture operation with Sandvik Corp. (Sweden). Anticipated total investment was K£ 250,000.*
 - (c) The Survey Centre prepared in 1969 a pre-feasibility study for cassava chipping and bagging. The study was accepted and the Government requested the Centre to nominate possible partners.*

^{*} Mr. F.M. Mwihia

- (d) Mr. O. Grane, expert attached to the Survey Centre, prepared a pre-feasibility study on the production of ethyl alcohol from molasses for use as a gasoline additive.

 Total investment was K£ 176,000.
- (e) Mr. Grane also studied possibilities for a local production of acetic acid, caustic soda and chlorine formaldehyde for a plant with an annual capacity of 11,000 tons. Further, investigations were made into: building materials production; sand and gravel excavation; stone crushing; extension of cement production; and production of lime, gypsum, plaster, concrete blocks, concrete pipes, structural clay products, asbestos cement, woodwool cement board, straw board and chipboard.* (OA 220 KEN 8)
- 1.4. Pre-feasibility Study for the Development of Oilseed and Vegetable Oil Production. Prepared by Mr. A.J. Garzon-Trula, 1972. The consultant recommended the establishment of a new edible oil factory as a joint venture, to substitute imports. Estimated total investment was K£ 700,000, of which K£ 300,000 was equity and K£ 400,000 was loans.*

 (OA 420 KEN 1-6)
- 1.5. In May 1975, the Survey Centre submitted to the Ministry of Industry an analysis with recommendations for import substitution industries. The most prominent items were: steam-generating boilers; simple water turbines and other electricity-generating machines; agriculture cultivating machines; milling machines; light tractors; office equipment; machine tools; simple textile machines; printing equipment; food processing machines; air conditioners and refrigerators (assembly only); pumps for liquids; spraying machines; foundries; insulated cables and wires; and electrical appliances. Some of the proposals were followed up by studies:* (OA 321 KEN 15)
- 1.6. The Survey Centre prepared a pre-feasibility study on the erection of a plywood plant at Kericho. Foreign participation to a value of KSh 30 million was anticipated. (1974)
 (OA 321 KEN 15 PT)

^{*} Mr. F.M. Merihia

^{**} Mr. Ondieke

- 1.7. The Survey Centre prepared a feasibility study on the processing of local fruits and vegetables for comestic consumption and for export. Foreign participation was envisaged. Interest was shown by a Norwegian company and by OPIC (United States).* (1973) (OA 321 KEN 15 PT C)
- 1.8. In 1977, the Survey Centre analyzed the growing availability of hides and skins in Kenya and recommended the establishment of new tanneries in suitable parts of the country. Interested foreign partners were located. Similar action was taken concerning furfural production, for which an investment agreement was considered with the Guinness Peat Group, Foster Wheeler and Escher Wyss.**

 (OA 321 KEN 15 PT C)
- 1.9. In 1977_a pre-feasibility study on metallurgical industries was prepared by an expert (Mr. S.S. Gill), with particular reference to the establishment of an integrated mini steel plant; the construction of diesel engines and pumping sets; and the setting up of a mini sugar plant. Foreign partnership was sought.**

 (OA 321 KEN 15 PT C)
- 1.10. The Survey Centre prepared a pre-feasibility study for the manufacture of ceramic sanitary ware. Estimated total investment was KSh 16 million.** (1972) (OA 321 KEN 15 PT D)
- 1.11. A terminal report on the production of low-cost modular pre-fabricated wooden bridges was prepared by a UNIDO expert in timber structure engineering, Mr. J.E. Collins. The project resulted in the erection of a factory that has had great significance for other developing countries.** (1974)

 (OA 321 KEN 16 PT B)
- 1.12. An expert at the Survey Centre, Mr. D.C. Munasingha, prepared a pre-feasibility study related to the development of a solar salt industry. Estimated total investment was KSh 64 million.*** (1975) (QA 321 KEN 38)

^{*} Mr. F.M. Mwihia

^{**} Mr. Ndiko

^{***} Mr. Leonard

- 1.13. In 1972/73, a pre-feasibility study including a market study on overseas sales - was prepared by Mrs. V. Schmidli, expert in the field of wool processing. She recommended hand-weaving projects in rural areas as a contribution to Kenya's rural development programme.* (CA 420 KEN 21)
- 1.14. In December 1974, the Survey Centre (Mr. de Voest) assisted the Government in the preparation of an investment agreement for the establishment of the Namyuki Textile Mill. The agreement was signed by Deutsche Entwicklungsgesellschaft, the Industrial Development Corporation of Kenya, the International Finance Corporation, and David Whitehead and Cons (investor and technical manager).**

 (OA 420 KEN 1-6)
- 1.15. In August 1972, a pre-feasibility study for the establishment of a fibreboard, veneer and plywood industry was prepared by Mr. L. Putna, UNIDO Special Adviser at ECA. Mr. Putna recommended a joint venture with Timsales Ltd. (United Kingdom). African Resources, New York was also interested. A preliminary agreement was reached with Timsales for the establishment of a company -Sokoro Fibreboard Ltd., in Elbourgon, Kenya. (OA 321 KEN 5)

^{*} Mr. Ondieke

^{**} Mr. Wawiye

2. SWAZILAND

- 2.1. Several pre-investment studies were prepared for the establishment of the Tinkhabi tractor factory. The Tinkhabi is a light, all-purpose tractor, manufactured under Indian licence. It was envisaged for the local market and for export to neighbouring countries, mainly in East Africa. The project received strong Government support and was subsidized. The records indicate that the project is still operational. The studies were completed 1973-1980.* (OA 321 SWA 8)
- 2.2. In 1972, Battelle, Frankfurt (Federal Republic of Germany) prepared a market and pre-feasibility study for the manufacture of valves, fittings and similar products, at a total investment of R 240,000. As a precondition for the manufacture of these items, Battelle recommended the establishment of an Export Promotion Office and the institution of a scheme for Export Credit Guarantee Insurance.* (OA 321 SWA 11)
- 2.3. In order to discontinue exports of wattle bank as raw material to South Africa, local processing into vegetable tanning was studied and recommended by a UNIDO expert, Mr. K. Rao. In 1975, he prepared a pre-feasibility study which was accepted by the Government.* (OA SWA 12)
- 2.4. In 1980, an expert (Mr. G.K. Elliot) studied the feasibility of manufacturing cement-reinforced particle board. The establishment of a small plant was recommended, at an investment of R 3.8 million, with a production capacity of 6,750 m³ per year, and creating about 150 jobs.

 (OA 321 SWA 17)

^{*} Mr. P.A. Batchelor

- 2.5. In 1972, Mr. M.H. Tantawi prepared a pre-feasibility study on the prospects of industrial utilization of molasses from the two CDC sugar estates. He recommended the establishment of an alcohol distillery to process the available molasses into fine-grade ethyl alcohol for export to the world market; he expected a production of roughly 15 million litres per year.*

 (OA 220 SWA 5)
- 2.6. In 1972, UNIDO experts Messrs. J. Candio and Cassidi and Mr. T.G. Loo of FAO concluded a pre-feasibility study on the establishment of fruit and vegetable industries with an eye to the export market. They proposed packing, grading and pre-cooling installations. The project was open for foreign investment.* (OA 220 SWA 9)
- 2.7. In 1974, the aforementioned Mr. Elliot (2.4.) investigated the production of bagasse panels. A foreign investor expressed interest, but no outcome can be gleaned from the records.*
 (OA 220 SWA 6)
- 2.8. In 1972, an expert Mr. D. Halliday prepared a pre-feasibility study on the production of feedstuff from bagasse. The surplus of bagasse not used as fuel for the sugar mills was recommended for the manufacture of compounded animal feeds for the local market and for export to neighbouring countries.* (OA 220 SWA 7)

^{*} Mr. P.A. Batchelor

3. UNITED REPUBLIC OF TANZANIA

- 3.1. Industrial Study and Development Centre (INDCENTRE). Since its establishment, about 170 studies - mainly pre-feasibility ones were prepared by the Centre. According to the former Project Manager, Mr. Ake Rusk, between 40 and 60 studies resulted in the setting up of local manufacturing units. Feasibility in the following major industrial fields was studied: cashew nut processing; detergents production; ceramic products manufacture; soya beans processing; locks and builders' hardware manufacture; leather shoe manufacture; electric wires and cables manufacture; wire drawing; umbrella assembly; starch production; battery production; ink manufacture; tanning; galvanizing; slotted angles manufacture; sandpaper production; bicycles manufacture; coconut processing; sugar production; soap and oil manufacturing; eucalyptus oil distillation; enamelware production; nuts, bolts and screws production; automobile tyres and tubes (production for foreign investors); galvanized water buckets and dust bins production; and leather glove making.* (1968-1976) (OA 420 URT 1)
- 3.2. A pre-feasibility study on local malt production was prepared by Vogelbusch (Austria) in 1972. Production of 10,000 tons per rear was recommended. A second factory, with a larger capacity, was also envisaged, as were enlarged supplies of raw material.*

 (OA 220 URT 7)
- 3.3. In 1976, a UNIDO expert Mr. P. Subrancian prepared a prefeasibility study on salt refining. The plant would be set up at Urinza, and have a capacity of 20,000 tons per year. Foreign participation by equity and management was envisaged.* (QP. 321 URT 10-3)
- 3.4. In 1980, a pre-feasibility study was prepared by a UNIDO expert, Mr. W.F. Chislett, concerning local production of leather board. The expert recommended the establishment of a small factory for the domestic market. The following companies were recommended to participate in the project with equity and management: Rudolph Schieber and Wentzel und Schmidt (Federal Republic of Germany) and Central Adamas (Italy).*

 (QA 321 URT 42)

^{*} Former counterpart directors of INDCENTRE were Messrs. Mbowe and Baronga.

- 3.5. Based on UNIDO studies, two pharmaceutical industries were recommended to the Government, one in Arusha, the other on the Island of Zanzibar. (1981)

 (Project number DP/URT/80/007)
- 3.6. From 1978 through 1982, a UNIDO expert, Mr. P. Mathelot, studied the feasibility of and assisted in the establishment of a sheet glass and hollow glass factory. Recent correspondence indicates that both projects are at a very advanced stage.*

 (Project number SI/77/802)
- 3.7. In 1970, INDCENTRE studied the feasibility of manufacturing wire and strip products. This project was envisaged for the private sector, with foreign participation, if possible.
 (OA 420 URT 1)
- 3.8. In 1971, an INDCENTRE expert, Mr. R. Ali, made a pre-feasibility study for an iron foundry, covering markets, raw materials and production costs, including total investment.*

 (OA 420 URT 1)
- 3.9. In 1979, an expert, Mr. G.W. Haase, prepared a feasibility report on the establishment of an additional brewery. The report covers raw material, equipment, investment, markets, etc.

 (009596)
- 3.10. In 1970, Mohamed A. Haiderbhai and Co. studied possibilities for the extension of sawmills, covering raw materials, equipment, markets and total investment.

 (002511)
- 3.11. An expert, Mr. S.B. Johansen, prepared a pre-feasibility study on the establishment of a ceramics (pottery) industry. The project was designed for rural areas. Foreign partnership was welcome. (1975) (009820)
- 3.12. In 1971, INDCENTRE studied the feasibility of setting up a furniture factory for export markets. The study analyzed raw material and equipment needs, working capital, investment, etc.* (002613)

^{*} Former counterpart directors of INDCENTRE were Messrs. Moowe and Baronga.

4. ZAMBIA

- 4.1. In 1974, a feasibility study on a wood-based distillation industry was prepared by Mr. E.F. Uhart. Products envisaged were ethyl alcohol, as an additive to gasoline, and charcoal as local fuel. The required investment was estimated at US\$ 9 million. Foreign partners under consideration were Distibois (France), Shirley (United Kingdom) and Carbon International (Federal Republic of Germany).*

 (OA 321 ZAM 24)
- 4.2. In 1974, an expert, Mr. Ahmed Khame, prepared a study on the production of various pharmaceuticals (in addition to existing production). The purpose of the study was to make recommendations on product improvement and the expansion of capacity and production programme.*

 (OA 220 ZAM 8)
- 4.3. Kienbaum Unternehmensberatung (Federal Republic of Germany) prepared a feasibility study for copper processing for semi-finished goods. The study was followed up by a second study and several evaluation reports.** (1973-1982)

 (OA 321 ZAM 4)
- 4.4. In 1979, a pre-feasibility study on the manufacture of ethyl alcohol and fodder yeast by fermentation was prepared by an expert,

 Mr. J. Meyrath. The project was open for foreign investment.**

 (OA 321 ZAM 26)
- 4.5. In 1971, an expert, Mr. C.L. Malhotra, prepared a pre-feasibility study on salt production, purification and iodization. The project was open for local and foreign investment.**

 (OA 321 ZAM 17)
- 4.6. In 1978, an Austrian expert, Mr. M. Schneider, recommended the establishment of a maize solvent extraction plant in his prefeasibility study. The project was open for foreign investment.**

 (OA 321 ZAN 16)

^{*} Mr. L. Nsama

^{**} Mr. Kasolo

- 4.7. In 1974, a pre-feasibility study on leather goods manufacture was prepared by an expert, Mr. V.M. Gonzales. The expert submitted a full techno-economic study covering cost calculations, equipment proposals and a layout for local tanneries. The project was supplemented by the expert Mr. G. Felsner in 1984.***

 (OA 420 ZAM 2-10)
- 4.8. In 1975, an expert, Mr. B. Lunden, studied the feasibility of tanning locally available hides and skins. The project was deemed viable and is open for foreign investment.

 (OA 420 ZAM 2-10)
- 4.9. In 1973, an expert, Mr. B.E. Hajdu, studied the feasibility of establishing a new agricultural machinery factory. The expert's analysis of market, investment capital and equipment requirements was positive.

 (004601)
- 4.10. In 1983, experts Messrs. D.R. Atkinson, T.R.W. Jarman, J. Turnball and D.J. Wholey studied the viability of a cassava processing factory. In particular, they analyzed such aspects as availability of raw material, finance, pest control and marketing. (012323)

*** Mr. B.S. Malumo

5. SRI LANKA

- 5.1. Several studies and raw material tests were done to assess the viability of processing the ilmenite sands which exist in abundant quantities on Sri Lankan beaches. In 1971, the Asian Development Bank approved a loan for preparatory work of US\$ 3.5 million, as well as additional funds for technical assistance.

 (OA 420 SRL 4)
- 5.2. In 1974, a report was prepared by the expert Mr. A.O. Schmidt on development aspects of machine tool production - starting from the steel industry. The creation of a machine tool design and development centre was recommended. Manufacturing facilities would subsequently be set up in co-operation with experienced foreign partners. (OA 220 SRL 38)
- 5.3. In 1974, an expert, Mr. H.J. Rothkirch, studied possibilities for the expansion and development of the desiccated coconut industry. He recommended new financial inputs from abroad to give the needed impulse to the then stagnating industry. Funds estimated for new equipment were in the magnitude of US\$ 150,000 to US\$ 200,000.

 (OP 220 SRL 33)
- 5.4. In 1977, an expert, Mr. D.P. Cody, studied the possibilities for furniture design and production by the Ceylon Plywood Corporation.

 Inter alia, he recommended co-operation with well established industries in developed countries.*

 (OA 321 SRL 37)
- 5.5. In 1981, experts Messrs. Jalong Chen and Weizhou Du prepared a pre-feasibility report on came and ractam processing. They made recommendations on the planting and harvesting of came, on processing methods and on the investment necessary for the production of rattam furniture.*

 (OA 321 SRL 77)

^{*} Mr. P. Thamber

- 5.6. In 1974, an expert, Mr. R. Varhelyi, submitted a pre-feasibility study for the establishment of an aluminium rolling and extrusion plant. He recommended the establishment of two separate plants, one producing 6,000 tons per year, the other producing 9,700 tons per year, and each with an extrusion capacity of 2,000 tons per year.*

 (OA 321 SRL 13)
- 5.7. In 1974, Mr. H. Kläy prepared a pre-feasibility report on electroporcelain manufacture in the Ceramic Corporation. He proposed the
 types of products as well as recessary investment.

 (OA 321 SRL 38)
- 5.8. In 1976, an expert, Mr. N.C. Thakurte, prepared a pre-feasibility study on the installation of a rubber plant for use in the footwear industry. He found that such a plant would be viable and essential. The study concentrated on raw material, equipment and investment requirements, as well as on employment, etc.*

 (OA 321 SRL 55)
- 5.9. In 1976, an expert, Mr. K.G. Olssen, submitted a pre-feasibility study on the manufacture of cigars from local tobacco. He advised on improvements of the tobacco plantations, on manufacturing methods and on investment requirements.

 (CA 321 SRL 48)
- 5.10. In 1981, Mr. Mohammed Bashir submitted a feasibility study on the manufacture of direct moulded sole footwear. He recommended that manufacture be started in the shoe factory at the Ceylon Leather Products Corporation. He analyzed such factors as raw material availability and wage and investment requirements.

 (Project number SI/SRL/79/801)
- 5.11. In 1984, an expert, Mr. C.R. Francis, prepared a report on the pressure treatment of timber. The report dealt with all aspects of installation of the necessary facilities. (Project number DP/SRL/79/053)

^{*} Mr. P. Thamber

6. MALAYSIA

Industrial Research, a number of pre-feasibility studies - many of them for the private sector - were prepared between 1971 and 1976. The studies dealt with: production of cattle feed from pineapple waste; manufacture of tanning powder from mangrove bark; extraction of thorium; fractionation of palm oil; extraction of essential oils; establishment of a tapica industry; production of lemongrass oil; extraction of rubber seed oil; rice husk panel board; fruit canning; establishment of a brick factory; and extraction of caffeine from tea waste.

(OA 420 MAL 1)

6.2. In 1971/73, detailed studies were prepared by a consultant, Mr. von Wendorff, on the establishment of wood product manufacturing facilities, with a view to local and export markets. His proposals covered: board products; veneered particle board, plywood products, moulding plants, furniture products, knock-down furniture, boat building, floating ship plant, wood wool plant, and fibreboard production.

(OA 221 MAL 14)

- 6.3. In 1972, an expert, Mr. J.A. Rant, submitted a pre-feasibility study on the manufacture of leather goods. He recommended adding a new leather goods department to the existing tannery and shoe factory at Kneitkaf in Kuala Lumpur. The expert proposed the manufacture of a number of other leather articles, bearing in mind the raw material and financial availabilities as well as the markets. (CA 321 MAL 3-2)
- 6.4. In 1973 Mr. Rant prepared another study, dealing with the enlargement, product diversification and upgrading of the shoe factory (part of his previous assignment).
 (CA 321 MAL 3-1)
- 6.5. In 1975, an Interregional Adviser, Mr. F. Sager, prepared a prefeasibility study on the recycling of used lubrication oil. He investigated methods of collecting used oil, quantities available, and financial and market aspects.

 (QA 321 MAL 38)

- 6.6. In 1975, an expert, Mr. J.W. Prins, prepared a pre-feasibility study on the enlargement of the local shipbuilding industry, including ancillary industries, through the private sector.

 (OA 321 MAL 34)
- 6.7. In 1976, an expert, Mr. V.J. Golubev, made a pre-feasibility study on the production of medical electronic equipment. He suggested a private sector industry with foreign participation. The equipment produced would be sold domestically and exported. (Project number DP/MAL/72/001)
- 6.8. In 1973, an expert, Mr. E.I. Niscanen, studied the feasibility of shipbuilding and repair (ocean-going). He made recommendations concerning construction, development of a new dock yard, infrastructure, facilities and equipment, employment, finance, economic aspects, etc. (004639)

TERMS OF REFERENCE

FOLLOW-UP ON INDUSTRIAL JOINT VENTURE PROJECTS IN SELECTED DEVELOPING COUNTRIES

PHASE I

- 1. The consultant will follow up on selected industrial joint venture projects and other long-term agreements originating from the Investment Promotion Services, Investment Promotion Meetings or direct contacts, and which were reported by the Investment Co-operative Programme as having been concluded. These agreements include, inter alia, buy-back agreements, market access, licencing, management and training, transfer of technology, sub-contracting and leasing arrangements. The following questions should be analyzed:
 - (a) What is the actual status of the project?
 - (b) Was the project based on a study? If so, what type of study?
 - (c) Was one of UNIDO's Technical Assistance Programmes involved?
 - (d) Who else financed and carried out the study?
 - (e) Who financed the implementation of the project? How was it financed?
 - (f) Was there any government financial or managerial support provided? If so, to what extent?
 - (g) _ Was any bilateral support provided?
- 2. As far as joint venture industries are concerned, the consultant should screen all feasibility or pre-investment studies backstopped by UNIDO during the last ten years. He should identify the following:
 - (a) How did the government, development institution or the industry (sponsor) make use of the study?
 - (b) Was the study adequate?
 - (c) Did the study lead to implementation of the project? If not, why not?
 - (d) Is it planned to update the study and use it for investment projects?

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TERMS OF REFERENCE

FOLLOW-UP ON INDUSTRIAL JOINT VENTURE PROJECTS IN KENYA, SWAZILAND, UNITED REPUBLIC OF TANZANIA, ZAMBIA, SRI LANKA AND MALAYSIA

PHASE II

- 1. The consultant will follow up, in the above-mentioned countries, on industrial joint venture projects and other long-term agreements originating from the Investment Promotion Services, Investment Promotion Meetings or direct contacts, and which were reported by the Investment Co-operative Programme as having been concluded. These agreements include, inter alia, investment agreements, buy-back arrangements, market access, licencing, management and training, transfer of technology, sub-contracting and leasing arrangements. The following questions should be analyzed:
 - (a) What is the actual status of the project?
 - (b) Was the project based on a study? If so, what type of study?
 - (c) Was one of UNIDO's Technical Assistance Programmes involved?
 - (d) Who else financed and carried out the study?
 - (e) Who financed the implementation of the project, and by what means?
 - (f) Was any government financial or managerial support provided? If so, to what extent?
 - (g) Was any bilateral support provided?
- 2. As far as joint venture industries are concerned, the consultant should screen all feasibility or other pre-investment studies backstopped by UNIDO during the last 14 years. He should identify the following:
 - (a) How did the government, development institution or the industry (sponsor) make use of the study?
 - (b) Was the study adequate?
 - (c) Did the study lead to implementation of the project? If not, why not?
 - (d) Is there a plan or necessity to update the study and use it for investment projects?
- 3. The consultant should select some operational joint ventures, representative of the country's industrial structure, and analyze the following:
 - (a) Was the origin of the project a study?
 - (b) Was UNIDO's Technical Assistance Programme involved?
 - (c) If the joint venture is considered to be a success, what role did the study play?

- (d) If the project was not completed successfully, was it because the study was wrong, incomplete, or superceded (e.g. excessive equipment costs, raw material prices, market developments, delays in construction, etc.)?
- (e) Which industrial joint ventures were implemented without studies?
- (f) What are the lessons learned regarding investment policy?
- (g) What is the most appropriate method of preparing investment projects?

