



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

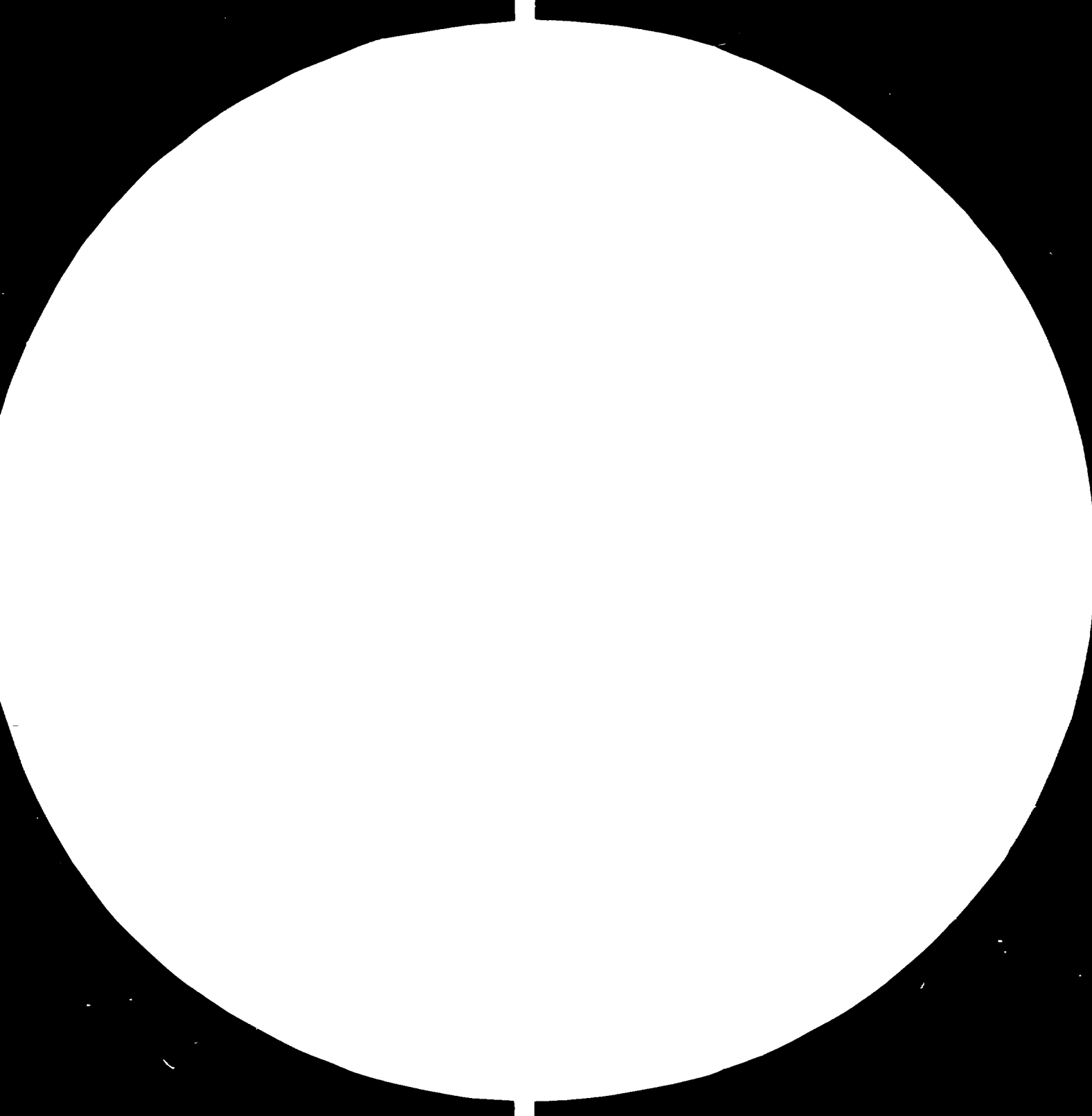
FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org





MP Resolution: Resolution Test Chart
Resolution Test Chart

RESTRICTED

11658

DP/ID/SER.A/369
18 June 1982
English

Morocco. ESTABLISHMENT OF THE ARAB REGIONAL
PACKAGING CENTRE.

DP/RAB/80/013

MOROCCO

Technical report: Documentation and information*

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

Based on the work of Mr. Samir Elsayad, expert
in documentation and information

002121

United Nations Industrial Development Organization
Vienna

* This document has been reproduced without formal editing

V.82-27848

TABLE OF CONTENTS

	page
Acknowledgements	2
Conclusions and Recommendations	4
Other Tasks done during the mission	11
Part I Introduction	12
Part II Prospective Users of the Information Centre	17
Part III Analysis of the types pf Information Needed	25
Part IV ARPC and Information Centre Objectives.....	39
Part V Programme of activities 1983-1986	46
and short term tasks	
Part VI Evaluation of existing facilities in IMEC.....	71
- Sources of information	
- Channels of communications	
- Extra Equipment needed	
- Staff requirements	
- Local,InterArab,International cooperation	
Part VII A- Implementation and Financing schedule of	85
the Mid Term Programme	
B- Experts required for the Information Centre	
and their recruitment schedule	
AppendixI Recommended Additional Periodicals,Reference Books;	92
Monographs,and Reports.	
AppendixIIWhere can industrial information be found ?	100
Additional Sources of information classified	
nationally and internationally.	

ACKNOWLEDGEMENTS

The writer wishes to acknowledge :

*The very much appreciated assistance from IMEC's
General Manager Mr. Abdelhaq BENNOUNA.*

*Acknowledgement is also extended to all IMEC's
technical and administrative staff.*

*The assistance and understanding from the UNDP Rep,
Miss HLASS and the UNDP Assistant Rep. Mr. DECASTERLE
and their staff is also much appreciated.*

UNITED NATIONS

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO

PROJECT IN THE ARAB REGION

JOB DESCRIPTION

DP/RAB/80/013/11-01/31.7.E.

POST TITLE : Expert in Documentation and Information.

Duration : Three months.

Date required : As soon as possible

Duty station : Casablanca

Purpose of Project: To foster the growth and expansion of the packaging industry in the region through the establishment of a Regional Packaging Centre.

Duties : The expert will be assigned to the Moroccan Institute of Packaging and will co-ordinate the activities with the counterpart General Director, in consultation with the Arab Industrial Development Organisation (AIDO) whenever appropriate.

RECOMMENDATIONS

AND

CONCLUSIONS

- 5 -
C O N C L U S I O N S
A N D
R E C O M M E N D A T I O N S

1. It is to be always emphasised that apart from normal activities, two tasks should be considered basic for ARPC and of continuous nature :
 - a) The up-to-date identification of the real situation of the Packaging industry in each of the Arab member countries ; its features, needs and priorities for development taking into consideration the level of social and economic development.
 - b) The identification, recording, continuously updating of an Arab experts' register in various disciplines of packaging.

2. ARPC should never miss that its real success will always be measured by its achievement in the formation of able Arab Packaging Cadres and Specialists through all its activities : training, information/documentation, research, field studies... etc. This target is a key one for the progress of the industry.

3. It should be realised that the establishment of a regional packaging centre must not be a substitute for national centres or Associations or Committees as each of them has its role.
As a matter of fact, practical fulfillment of ARPC aims will depend to a large extent on the existence of support points

in each country (a communication link).
The form of a packaging association or committee is primarily considered suitable, better if connected somehow to an existing local research centre or to a ministerial department for industrial development.

These committees in a future stage will also collect, systematise, study and analyse information originating locally and feed it back into the ARPC system.

It is recommended that during the preparatory stage and the Mid-Term programme an effort need to be done by AIDO and IMEC and UNDP to help individual countries to establish and strengthen their packaging Committees. This help may be both by elaborating a scheme for organisation and mobilisation of the Committees and also by limited financial assistance.

Activation of these contact points (information nuclei) is necessary by giving them duties within the documentation centre short term tasks.

4. In executing the Mid-Term programme and only with certain activities (e.g; Market/technoeconomic studies, the Dictionary and the packaging directory), it may be recommendable to use the assistance of specialised subcontracting offices in order to minimise the number of permanent staff and at the same time guarantee a professional job.

5. It is important that the ARPC Documentation/Information Centre plays an active role of creating demand.
The receptiveness of industry particularly in developing countries is usually so small and so fragmentary that a systematic search for and handling of knowledge can only be expected from a minority of enterprises.

It is fundamental to the success of any communication process that the intended recipient of the message must be attentive and ready to receive it. Where the recipient is not sufficiently motivated, communication suffers.

6. Currently there is no governmental or non-governmental effort to protect the end consumer of the packaged goods. In many cases there is no awareness of the necessity of customer protection. One important responsibility of ARPC is to make governments aware of the contribution that proper packaging can make towards improving health, sanitation and the general standard of living of the population.

7. As regards facilities and systems of the documentation department of IMEC ; the general conclusion is that the basic systems in use for indexing, classification of documents and processing of information need not be changed at this stage. They are adequate for the transitory period and adaptable to the new demand. Unfortunately the system has not been tested long enough because of significant shortage of experienced staff.
Presently IMEC has a preprogrammed "Mini Computer", a word processing machine (text treatment olivetti machine), which it is thought can be quite adequate for the next stage of ARPC project. It is only urgently needed to train personnel on mastering the various possibilities of the machine. At the end of the mid-term programme the possibility of computerisation is to be studied by a computer expert in the light of prevailing facts at the time.

8. ARPC staffing is suggested to be kept always at a minimum depending on the staff available in IMEC. Accordingly only additional personnel is proposed.

9. Only extra equipment of immediate need is included in the estimate budget. However for the full scale project a complete small offset printing outfit with facilities to prepare the printing plates will be needed. An estimate cost of this outfit approx. \$ 100 - 150 000.
10. The collection of books currently existing in IMEC is considered far from enough neither for IMEC not for ARPC requirements. An additional list of books, monographs and periodicals is attached to this report.
11. For the abstracts service an agreement is recommended between ARPC and one of the well established institutes like PIRA for purchasing of their packaging and printing abstracts.
12. When information is disseminated to industry, the established channels of communication should be used ; for example those maintained by the national packaging committees, Arab Federations for Paper and printing, for food industries... etc, ASMO, AIDO and other regional specialised centres, ministries of industry, chambers of commerce and industry and professional associations.
13. As regards the second important activity of the centre (Training) it is urgently required to prepare training materials in Arabic language. Contents must be under constant review to keep education training schemes in line with a changing industrial scene. Priority must be given to training of trainers (instructors) from all Arab countries together to create a Common language between them and to exchange experiences. This should assist information users' reciprocity.

14. Sectorial studies must be extended a little during the mid-term programme to include a study on printing and package design.
15. To achieve its goals efficiently at reduced cost ARPC has to cooperate with other packaging and information centres and organisations ; in Morocco the host country ; in Arab countries, and internationally.
16. Meetings and discussions were held with Mr. Soltan, the UNIDO expert for preparing the ARPC project document, and he was given requested information for the preliminary project document. Discussions were also held with Mme David, the UNIDO documentation information expert for IMEC and she was also given background informations on the programme of activities of ARPC information centre and objectives...
17. Actions Needed and Priorities
 - UNDP / UNIDO
 - . To finance and provide required experts, equipment and books.
 - A I D O
 - . Partly finance the programme of activities
 - . Cooperate with IMEC in attracting further finance for the project
 - . Assist in implementing the various tasks as appropriate.
 - I M E C
 - . Appointing as soon as possible normal staff in its information departement to be trained on the job and to be in a position for the switch over to pan-arab responsibilities. The same applies to the training dept personnel.
 - . IMEC cadres need to improve on their Arabic language and better also to learn English, the foreign language

used in most Arab countries except North African ones. Also most of the materials published on packaging are published in the English language.

- . IMEC cadres must rely on acquiring experiences of their own through performance of their jobs, and through realising their weaknesses and learning from their mistakes, and being able to make decisions. They should not be working all the time under the supervision of experts.

Mid-term absolute Priorities

1. Formation of national packaging committees (information net work)
2. Writing translating reference books on packaging
3. Studying the packaging state in each Arab country
4. Acquiring of training materials and the training of trainers.

Other tasks the writer has done
during the Mission

1. Upon the request of Mr. Pennouna the general manager of IMEC, the writer has taken an active and major role in the preparations, organisation and running of a pan-arab training course for Arabe packaging personnel, organised by AIDO, ASMO and IMEC. In addition the writer has also lectured in the event on "Printing and its role in packaging development". The writer's efforts as a whole were appreciated by IMEC'S general management and other participating Arab organisations. The UNDP assistant representative Mr. Decasterle was informed of this involvement.

2. Working with few IMEC cadres in the preparation of lectures in Arabic language and helping with a lot of terminology arabisation.

3. Participation in solving a package design problem for a Moroccan customer. New concept suggested by the writer was appreciated and going to be adopted by the customer after being worked on and refined by IMEC's designer Mr. ZAMAT.

INTRODUCTION

PART. I

I N T R O D U C T I O N

Being the first UNIDO expert to be recruited for the Arab Regional Packaging Centre Project, it might be appropriate to record a bit of the history :

In 1973 the first Arab Packaging Experts meeting in Cairo has designated the Moroccan Institute of Packaging , to carry out, with the collaboration of IDCAS, the task of documentation and information until the creation of an Arab Regional Centre.

Later a decision was made by the third Arab National Packaging Committees meeting in 1977 in Casablanca to convert The Moroccan Institute of Packaging into an Arab Regional Packaging Centre.

The project document defines the development objective to which the preparatory assistance is related as to foster the growth and expansion of the packaging industry in Arab Countries through the establishment of an Arab Regional Packaging Centre by providing technical advisory services to packaging industries in member Arab Countries ; by organising training programmes, technical expert group meetings, seminars, symposia, workshops, by carrying out applied research and studies and by collecting and disseminating data related to packaging.

Consideration was given to the Mid-Term programme which is to be carried out over four years, proposed by AIDO and approved by the fourth meeting of the Arab National Packaging Committees 1980.

One of the main tasks of any packaging promotion institute is to collect, process and disseminate information on all aspects of packaging for industry, government and business community.

The impact of an institute's second major activity - education and training - will depend upon the nature of the documentation it collects, how the data are classified, and the form in which they are disseminated unless an institute has a well organised documentation centre it cannot accomplish the tasks expected of it, whatever is spent on other activities, including education and training will be effective only when supported by the necessary documentation services.

The concentration of the Documentation/ Information activity in a regional centre should accelerate the programme and should contribute to optimisation & better utilisation of financial resources.

Consultations were made with the general manager of IMEC. Unfortunately it was not possible to have meetings also with the general manager of AIDO.

References consulted included UNIDO and ITC Publications and IDCAS Expert reports.

METHODOLOGY ADOPTED

The Mission

The aim of this mission was formulated as to study the transformation of the existing Documentation/ Information Department of IMEC into a Documentation/ Information Centre for the Arab Regional Packaging Centre, equipped to serve all Arab Countries.

The duration of this mission was planned to be three months, but it was reduced to two months (1st phase 28 February - 27 March, 2nd phase 29 April - 30 May 1982).

The basic objective of an industrial information service is to promote industrial growth. Its functions will be determined by the particular geographic, economic and social conditions of the region and by the technical requirements of the industries to be served.

M E T H O D O L O G Y :

- First : The identification of prospective users in the region, of the Documentation/ Information services and their categorisation (to define the recipient).
- Second : Determination of the types of information needed by the prospective users (to identify the demand).
- Third : What would be the best and most appropriate services to satisfy such need (Tailor-made supply).
- Fourth : In the light of the above, the evaluation of the facilities and systems presently available in IMEC.
- Fifth : Suggestions of ways and means to develop the facilities in IMEC to make them able enough to meet the new demand.

PART II.

PROSPECTIVE USERS OF THE
CENTRE IN THE REGION

PROSPECTIVE USERS OF THE DOCUMENTATION/ INFORMATION
CENTRE , IN THE REGION

The scientific approach to obtain this information would have been through field studies, in the respective countries.

It is scheduled by U N D P within the project preparatory stage to perform Packaging studies in Arab States. Actually those studies should have been completed before the start of this mission which would have enabled the writer to draw on their findings.

However, in the absence of the above, the writer drew on :

- a/ His first hand experience and knowledge of most Arab Countries in the field of packaging through his business visits and contacts (the writer had previously visited Saudia Arabia, Kuwait, Lebanon, Bahrain, Emirates, Syria , Libya, Morocco and Egypt) and ;
- b/ Reports presented to the 1st, 2nd, 3d and 4 th meetings of the Arab National Packaging Committees 1973, 1975, 1977, 1980 ; by Countries' representatives and their discussion.

CHARACTERISTICS OF THE POTENTIAL MARKET FOR
DOCUMENTATION/ INFORMATION
SERVICES

The packaging market in the Arab Countries has been influenced by the following factors :

- A. The non existence of proper academic education in packaging.
- B. The non existence of packaging institutes who, if existing, would be expected to disseminate information and to perform training tasks ; with the exception of Morocco where a professional institute is already in operation and of Egypt where exists a packaging association reasonably active in running some training and a quarterly Bulletin.
- C. Lack of trained personnel for various jobs has always been reported by Arab Countries' representatives. There is a strong need for general and specific training, which is felt all over the member countries and which means that participation and enthusiasm for A R P C future functions will be there, nevertheless continuous effort is to be made to promote such activities.
- D. The non existence of any reference books dealing with aspects of packaging in Arabic language.

- E. In the Arab Countries like in many developing Countries, there is only very limited awareness of the importance and role of packaging. In developed Countries, there is a high degree of package awareness amongst the public and amongst the various sectors (user Companies, producer Companies, educational institutes, environment concerned bodies ... etc, and the importance of packaging is well recognised.
- As a consequence of this nonawareness and in the absence of Documentation/ Information being distributed to package producers and package users, people are not even aware of developments in the field and the packaging industry as a whole is still unsatisfactory in terms of both quality and quantity.

As I said elsewhere the best way to identify the industry 's status should be through a field study/ market research.

However an attempt is made below to outline the picture through introducing the main worries of and problems facing people in the field. Such outline indicates the type of market ARPC is going to deal with Via its Documentation/ Information Centre :

1. There are definitely a number of Arab specialists in various disciplines related to packaging but unfortunately they are not known, not registered and hence their expertise is not exploited by others. It is going to be a matter of urgency that ARPC prepare an Arab experts register.

2. It is very difficult in Arab Countries, presumably like many developing countries to obtain and collect reliable statistics. There has been for sometime, a trend to create a statistical system to be unified for all Arab Countries. If done, it helps a lot in the evaluation of existing industry and in planning developments and forecasting consumption trends, especially considering the unparalleled rate of population growth in some countries.

3. In most Arab Countries all packaging raw materials are imported from abroad. This imposes mainly two problems : first having to keep high stocks to guarantee continuity of production, and second the freezing of a lot of cash. The stockage of large quantities usually allows high percentage of spoilage and waste due to environmental conditions, long and bad transport conditions etc...

4. In many countries there are still a significant part of ready made packages being imported. The high transport cost especially for the bulky types like cans reflects on its economics (Gulf Countries).

5. Although the packaging industry is really big, there is no local manufacture of packaging machinery at all. There are some attempts to produce small injection moulding machines and stapling machines in Egypt. There are also facilities in a few places to manufacture moulds for plastic machines.

6. In some cases some countries have been oversold on too fast too complicated machinery ; an unnecessarily expensive investment and the machines can never be operated to capacity and often cause intensive mechanical trouble.

7. In many places there is a significant number of very old machinery in very poor working conditions, but still in non stop production. This machinery poses the problem of spare parts, inadequate rates of production and low precision (Syria , Algeria, Egypt).

8. Even in cases where investments have been made in new machinery, such machinery is often operated at very low productivity rates (Gulf). There are various reasons for this amongst which are the deficiency of skilled labor for machine operating and maintenance, the non clever choice of the machines for the purpose, the deficiency in spare parts..., etc. (Saudi Arabia, Libya, Kuwait, and Bahrain).

9. There are obvious problems in marketing, storage and transport mainly due to the absence of a system for distribution and due to the chaos in sizes of packages and containers ... etc.
An enormous amount of work must be done in improving the infrastructure background of most Arab Countries in order to achieve better transport and handling conditions, all ultimately having an important influence also on packaging for the export as well as for the domestic markets.

10. Absence of regulations and standards to organise the packaging activities which usually lead to protection of the produce and protection of the consumer. There is also no unified terminology in use amongst the Arab Countries.
That is why ARPC is urged to produce a packaging dictionary (glossary) in Arabic, English and French.
11. Despite the existence of examples of most modern technologies and equipment for package production one can easily notice in some cases the low standard of package quality and also the significant variations in quality levels within a market.
12. Very limited number of research and laboratory facilities able to conduct work related to packaging materials and containers. If found, they will be more involved in academic rather than applied research.
13. Insufficient quality control on materials and products.
14. In many cases package users are not always aware of their problems.
15. The majority of package users complain from unnecessarily high package cost in relation to the product cost, and are interested in reducing the cost of the packages being used.

16. The packaging function in many chemical and food industries (package user companies) does not receive from top management enough attention as much as other processes in the production line.
17. There exists lost communication in many cases between producers and users of packages. Some kind of communication and mutual understanding is needed between package producers and package users. Perhaps the best way is on the basis of well designed, clearly defined specifications which the user accepts and the producer commit himself to.
18. Many plants would have limited flexibility to change its programme, to widen its range of products ... etc (mainly because they are tied up by purchase of moulds from abroad, available stocks of materials, which are sometimes already printed abroad, etc.), (Saudi Arabia and Gulf).
19. A general complaint is that local governments impose taxes on imported raw materials and impose another tax on finished goods being marketed (including the package), this consequently raises the cost.
20. There is no current exchange of information between the Arab Countries themselves in packaging.
21. An almost general problem is the inadequate printing quality and designs. There is a big need for basic knowledge in package design and printing techniques.

PART III.

TYPE OF INFORMATION NEEDED

22. In some countries (North African and Jordan) the agricultural produce is an important sector for export. These countries being adjacent enough to export markets in Europe has influenced the type and quality of their packages.
23. The current existence of a few petrochemical plants in Arab Countries is likely to change the pattern of many conventional packages and to increase sharply the transformation to plastic applications.
24. The growth of the industry in many of the Arab Countries in the last few years created an urgent need for increasing numbers of technologists trained on management of various packaging operations and related jobs. It is a fact that in North African Countries dependency still heavy on foreign personnel especially in key senior jobs.
25. There is a strong competition facing exports from Arab Countries. In some cases the product is very good but either the cost is high or because of inferior package quality and design.
26. It can be said that there is a general lack of information, lack of knowledge of the sources of information, and language difficulties.

27. Finally it can be anticipated that Arab Countries will not long be content to export their products in bulk as raw materials or in semi-processed form, but will in the future strive towards an increased local processing of their indigenous raw materials, so that the added value resulting from processing may be kept in the producing country.

POSSIBLE USERS OF THE CENTRE SERVICES

- § - The personnel of ARPC, specialists and experts ...
- § - National Packaging Committees
- § - Persons and enterprises in the field of packaging related industries , industrial, commercial, agricultural, export, also transport , insurance, etc...
- § - Ministries of Industry and other Government Agencies
- § - Research Centres in Arab Countries
- § - Arab National and Regional Organisations
- § - International Organisations existing in the Arab Region.

ANALYSIS OF THE NEEDS OF THE PROSPECTIVE USERS

(TYPE OF INFORMATION NEEDED)

The industry needs information that is immediately applicable to current problems and which is presented in a form that permits rapid assimilation.

The aim of regional documentation services is usually to meet the needs of a large group of users with differing background, activities and interests via providing abstracting services and bibliographies, etc... Industrial information services, however, should be designed to cater to the individual needs of a specific industrial customer by supplying precise information for the solution of problems.

A distinction must be made between the information flow that should be continuously provided to industrialists on general subjects (legislation, management techniques, new processes and equipment, applied research results, etc...); and items of specific information that are tailored to meet the needs of a particular consumer.

Packaging has a multidisciplinary nature. It is an art and science. It is materials and equipment , it is protection, promotion, law, logistics, manufacturing and materials handling, all rolled in one. For the manufacturer, the converter and the user alike efficient and cost effective packaging demands "knowhow".

The packaging industry resembling other basic industries has similar problems of Managerial, Technical, Commercial and Marketing nature. It can be said, however, that the packaging problems are more complex due to their interrelation with each other and their interrelation with other industries and services (User industries, transport, insurance, etc..) Some packaging problems have also a legal aspect.

It would be expected from the Documentation/Information Centre to supply knowledges and data covering all above disciplines.

ANALYSIS OF THE INFORMATION DEMAND

In the light of the characterisation of prospective users of information services (the recipient), an attempt is here made to categorise major subjects most information demanding , it is to be noticed that they are not in order of priority :

1. On the status of the packaging industry in each member country, future developments and forecasted trends in various Arab markets.
In this respect sectorial field studies which may also be done by other concerned bodies can be useful : (e.g. on paper/board and their converting, plastics, pharmaceutical packages, etc...).

2. Model feasibility studies of some packaging projects.
3. Skills and knowledges of how to evaluate projects and using study cases, the systematic approaches to handle productivity improvement and to do industrial costing and pricing.
4. Experience of other plants, local and abroad, particularly in developing countries in lowering costs, reducing wastes, raising productivity in packaging and related industries. Exchange of experience among Arab Countries is most effective.
5. Up-to-date information abstracted and in full on recent developments in the field both in industrialised and developing countries.
6. Reports on market research in export markets.
7. Specimens of liscence agreements and of contracts with industrial consulting firms including conditions for delivery of industrial plants.
8. Identification of technologies most suited to the region, current information on existing technologies , new inventions in the field, also suitable packages for new products.

9. Considering the problem of adapting techniques and machinery obtained from abroad to the special circumstances of the importing country, as for example, the relative cost of capital and labour, factory sizes and installed capacity and the adaptation of the characteristics of the products to local market requirements ;
Wise selection of these techniques and machineries must be based on knowledge of the ranges available and skill in comparing alternatives in terms of technical performance and economic return.
Methods and informations advising on such subject would be necessary .
Also guidelines for purchasing and specifying machinery, with specific recommendations on how to include provisions for training of machine operators, installation and running -in of the machines, maintenance instruction, servicing conditions, spare parts supplies, etc...
Machine types and suppliers can be found in worldwide inventories.
10. Knowledge and skills of clever choice of raw materials for specific applications.
11. Surveys and evaluations of available local raw materials in each member country, both technical and economic.
Research results on identifying new areas of application.
12. Imported raw materials are usually subjected to loss and spoilage. Guidelines for protection of various raw materials in common use from spoilage and wastage during shipment and transport is needed. This may be accompanied with information on laying purchasing instructions including specifications of the type of raw material shipping package.

13. Reports on existing petrochemical plants in the region and information on produced types and specifications & comparisons with conventional European supplies.
Also surveys on optimum use and various applications of each material (Polyvinylalcohol, Polyethylene, Polystyrene, etc..).
Information on the future of conventional packaging and possible trends especially in the markets where petrochemical plants were established with particular emphasis on flexible packaging and laminates.

14. Raw material recycling : possibilities, procedures, successful example applications.

15. Quality control. Work on quality should aim at quality improvement or value improvement. The initial step would be to identify quality of presently adopted packaging and materials, the second step is to effect improvement thereon. Information covering the whole subject is continuously needed. Quality control - why and how ; procedures, the cost of no quality, sampling, standards and quality ... etc ; methods and procedures for testing the characteristics of raw materials (paper , board, glass, plastics, jute, timber, adhesives ...) ; for testing of retail packages both flexible and rigid, shelf life, compatibility , resistance to mechanical and environmental hazards ; for testing of transport packages made of board/plastics/metal/timber, etc.. such as resistance to shocks, impacts, vibration, compression, rolling, stacking, rain, salt spray, humidity.
For exporting countries, stress is to be made on export goods and their packages.

16. Environmental pollution by packaging. The sensibilisation of concerned personnel on this subject is required, also keeping them aware of the regulations abroad and limitations of the use of certain raw materials, etc... Also information on the conservation in raw materials and contribution to the reduction of water and air pollution.

17. Information on surveys of various laws in force in the region and attempts for their compilation. One objective is to introduce packaging laws aimed at consumer protection in the region. For comparison, up-to-date information on legislation of export markets is also required.
Information to assist standardisation of materials and packages.
The objective of the standardisation effort is rationalisation, variety reduction and cost optimisation.

18. Palletisation, transport, handling and distribution systems. The more rapid the industrialisation in a country the greater the strain on the distribution system that previously served an agricultural economy.
It is important for packaging industrialists to know the storage, handling and transportation in their country itself as well as in the regions of destination for export.

19. Information on export markets such as climatic conditions, accepted unit weights ; opinions on package design, convenience, environmental pollution, compulsory requirements for labels, lettering, coding and signs usually help the promotion of exports.

20. Guidelines on the design of training programmes.

21. Information on forthcoming training events in packaging both in Arab member countries and international, also information on future exhibitions, seminars, meetings...

22. Training materials : syllabus, tests, aids, films, out of available international courses and also courses and materials adapted to conditions in the region.
Priority is to be given to courses on the basis of packaging to increase the awareness before trying to create specialists.

To realise what subjects may be taught and to what extent, it is essential to consider the following three principles :

- a - Analysis of the elements and functions of a package and their interrelationships,

- b - Analysis of the elements involved in the total cost of a package,

- c - Analysis of the specific situation of each country and its level of industrial development.

Hand in hand with a broad knowledge of materials and forms of packaging, must go an intimate knowledge of the processes used in the manufacturing and assembling of packages.

The following are examples of subjects :

- . The understanding of materials : their manufacture, properties and use.

- . Various packing techniques : filling, wrapping, sealing, bundling, sterilising, etc., handling, warehousing, carloading.

- . Machinery : some consideration of equipment is an important part of any packaging programme.

- . Costs : good understanding of the various elements that enter into the overall cost of a package.

- . Printing : the knowledge which calls for close cooperation between manufacturers and users of printed packaging materials.

- . Legal considerations

- . Testing and evaluation : the means of professionalism in this field might be the thoroughness and adequacy of the test methods that are used . The proof of any package lies in its performance.

- . Specifications : this is the means of communicating in precise terms with purchasing, manufacturing, quality control, etc..

The following is a grouping of the type of knowledges anticipated to be covered by the centre :

- Introduction to packaging : definitions, principles of packaging.

- The necessity for packaging : assessment of product, hazards of distribution, marketing and economic factors.

- Principles of protection : against climatic damage, mechanical damage, other damages.

- Packaging materials : wood, plastics, glass, metals, paper/board, textiles, laminates.

- Types of packaging : unit packaging, transport packaging, pallets, palletisation and filmwrap.

- Accessories for packaging : cushioning systems, adhesives, sealing tapes...

- Packaging and production processes of goods, mechanisation of packing process, machinery.

- Materials handling, movement and storage.

- Package testing and development.

- Specifications and quality measurements for control.

- Transport and insurance.

- Rationalisation and Standardisation.

- Legal requirements.

- Marking, identification and labelling.

- Package design. printing.

- Economics of packaging.

- Applied packaging : fresh fruits and vegetables, canned foods, dates, fish, dairy products, etc...

23. Lists of scientific and research bodies in Arab countries indicating their capabilities and facilities to do what type of service relevant to packaging.
24. Guidelines on how to make use of the assistance of international organisations.
25. Ideas on the content of a small basic packaging library with indications of the sources for acquisition of the materials.
26. Updated register of Arab experts with their names, positions, places of work and advisory capacity per each individual country.
27. Guidelines on the formation of packaging associations.
28. Information on consultants or associations available in member states specialising in package graphic design.
29. Individual demands for information from industrialists usually have to be analysed and defined in terms of local conditions.
The industrialist who requests information or states his problem is frequently unaware that there are several facets to his inquiry and a number of possible answers. The information service must therefore split up complex problems into manageable components.

PART IV

DOCUMENTATION INFORMATION CENTRE

OBJECTIVES

30. Special attention is to be given to information on :

- For all countries : package design and printing.

- For Saudi Arabia : Dates treatment and packaging, transformation to new plastic applications.

- For Jordan : Matters related to the exportation of fruits & vegetables.

- For South Yemen : Fish transportation and conservation.

- For Sudan : Paper/board transformation, printing, inks.

- For Iraq : Transformation to consumer packaging from plastics, printing of flexible materials.

- For Kuwait : Plastic moulds manufacture in Arab countries and abroad.

- For Syria : Glass manufacture and design.

STRATEGIC

AIMS OF ARPC :

The strategic aims of ARPC can be outlined in the following broad categories :

- a) To contribute to the growth and development of industry as a whole in the Arab Countries with a view of regional planning and consolidation and increasing of inter-arab cooperation.

Through :

the development, of the packaging industry in terms of both quality and quantity of technologies used, machineries and most important personnel training and education in such a way leading to reduction of losses, wastes, raw material consumption and energy consumption.

Also through :

research on the substitution of local packaging raw materials for imported ones and the choice of appropriate technologies for the region in the field of packaging and related industries and its adaptation to local conditions.

- b) To contribute to the Arab Strategies of ensuring food security.

Through :

rationalisation of food consumption, reducing losses of national produce of foodstuffs due to no or inadequate packaging.

Also through :

the introduction of the right and complete packaging concepts i.e comprehensive solutions from the technical and economic points of view including most suitable packaging materials, machines, manpower, marketing elements, production and overall cost and transport and distribution systems.

- c) To strengthen and support export efforts in Arab Countries and help the promotion of further exportation via the improvement of export packages quality, at minimum cost, and up to international standards.

- d) To contribute to national efforts of protection of the consumer and protection of the environment.

ARPC aims then at supporting industrial development in Arab Countries and providing services which are beyond the scope of national packaging committees and centres. It is also an instrument of cooperation and coordination between the member countries in packaging and is meant to assist in creating grounds for joint or group production, marketing and /or investment.

With the objective of ensuring an adequate transfer of experience in this field of activity within the Arab Countries , ARPC is planned to include a Documentation/ Information Centre for collating and disseminating information in the field of packaging and related industries.

Its main functions would be :

- 1°/ To identify the type of informations needed.
To collect, collate and store information, data, and documents useful for the technological and managerial advancement of the Arab Countries.
Bearing in mind the multidisciplinary nature of packaging, the sources of information must be also wide spread and industrial unpublished reports should not be overlooked.

2°/ To promote an intensive utilisation of the knowledge existing within the member countries and abroad and to disseminate information to the persons and organisations engaged in packaging development and promotion (including ARPC personnel, national packaging committees, specialised regional federations, industrialists, exporters etc).

LONG TERM OBJECTIVES

Geared to ARPC strategic aims previously outlined, the following points sum up the major long term objectives of the information/documentation centre within ARPC :

- 1.. To spot light and deepen the appreciation within the Arab region of the role packaging can play in developing national economies ; amongst the export, the industrial, the agricultural and the commercial sectors.
- 2.. To contribute to the sensibilisation of Arab Countries as to the importance of information services in unification with the aim of reaching unified procedures and systems in treatment and exchange of information among Arab Countries.

- 3.. To transfer to concerned personnel in the field (packaging materials' producers, manufacturers of packages, users of packages and packaging materials , exporters, government officials,...) ; the sort of knowledges and informations which will upgrade their skills in management of the packaging function and in making wiser decisions to reduce cost, optimise the use of materials, develop more competitive export packages , etc...; using for this various means of communication. Emphasis should always be given to export oriented industries in each country.
The information/documentation center also contributes to knowledge and technology transfer not only to but also from the region.

- 4.. To assist the need-based professional training activity of ARPC and also of the national packaging Committees to elaborate programmes and prepare training materials in Arabic language aimed at developing the requisite technological and managerial skills with a unified approach to the problems of the region.

- 5.. Assistance of ARPC's other departments and personnel to carry out efficiently their programmes.

- 6.. Participation in national and international conferences in the field of industrial information - documentation and collaboration with Arab and international information centres.

P A R T . V

DOCUMENTATION INFORMATION
CENTRE

PROGRAMME OF ACTIVITIES

1983 - 1986

PROGRAMME OF ACTIVITIES
1983-1986

The industrial information service must not limit itself to the passive role of just helping firms when asked to solve their problems. The industrial information service can perform an important service to community by playing an active role of creating demand. The first step is to create an awareness of the need for information and the advantages inherent in its efficient application. Then the stimulation of demand for information.

The best way to stimulate demand for information is through personal contact, and once industry is assured that the national or regional information service is aware of its needs and will supply information tailored to specific requirements, the demand for information will swiftly increase.

In industrial information there are no one-way streets. Everyone within the system both information personnel and industrialists must be prepared to take and give information, the good flow aids development.

The most urgent requirement in this context is the establishment of national packaging committees as an organisation (network) of the flow and exchange of knowledge, data and documents within the region.

Publications issued by the centre should make a contribution towards compensating the shortage of technical and managerial expertise in industry in Arab Countries. In addition they should perform a promotion function. They will also increase industry's receptiveness to and demand for information. Finally the dissemination of publications should provide a feedback mechanism to the centre to enable it of supply of additional information in areas not already covered.

THE THREE WAY FLOW OF INFORMATION

 / ARPC INFO CENTRE /

- FEED FROM CENTRE TO COMPANIES, PACK_g, ASSOC, AND OTHERS
- BACKFEED FROM RECEIVING COMPANIES, ASSOC, TO CENTRE
- CROSS FEED AMONG COMPANIES AND AMONG COUNTRIES.

HOW CAN THE CENTRE HELP IN MEETING ITS USERS' INFORMATION
NEEDS ?

By :

- Drawing attention to significant current developments and information within the relevant sphere of interest;
- Undertaking information searches and presenting the results in a suitable form ;
- Putting the users in touch with useful local and external expert knowledge and advice and seeking help from similar information centres abroad when required ;
- Procuring and producing bulletins, bibliographies, abstracts, indexes, alerting services, information reports, literature surveys, or state-of-the art reviews and other tools ;
- Processing requests for translations, loans, photocopying and other library services ;
- Maintaining detailed records of all enquiries and requests for information and ensuring that these records are indexed and incorporated in the main information system ;
- Publishing reference books, monographs, packaging directories, dictionaries, etc
- Preparation of promotional tools such as films, audio visual aids, exhibitions and contests, etc ...

/ENQUIRIES/ ANSWERING SERVICE /

A technical enquiry service should be designed to answer questions supposedly in Arabic language concerning problems of industry on types of equipments, materials, operating techniques, management techniques , etc ...

Requests may come from industry itself in the public and private sectors, Ministries, Planning Organisations, Universities, etc.

This will necessitate the availability of translation service (at least one permanent English to Arabic translator ; better of English and French to Arabic).

The enquiry service should depend first in answering questions on its own resources, its reference collection, experts, or from local facilities such as libraries and information centres.

The enquiry service should also have full knowledge of information sources (Research Centres, Documentation Centres) in the Arab States and should create a sort of cooperation with them. In addition close links should be established with international documentation/information centres in the field of packaging both in developing and developed countries.

Three important factors are to be considered in running an enquiry service. Firstly in addition to being accurate and responsive the enquiry service must be timely. Answers should be delivered as quickly as possible, or they are likely to lose their significance for the requestor.

Secondly responses should be direct and to the point. It is frequently better to under - rather than - over deliver particularly with scientific and technical people.

Thirdly there is the factor of personal relations and aggressiveness.

Despite the fact that complex searches will undoubtedly be time consuming, this should in no way prevent communications at both the time of the enquiry receipt and answer delivery.

Only through personal contact and acknowledgement and delivery and only through honest analysis of the product delivered - with the recipient - can confidence be built up. As regards aggressiveness, it is necessary at least in the beginning to visit some client firms and solicit enquiries. More announcement of the availability of an enquiry service will not be sufficient, at least until familiarity and confidence are built up.

For this reason the writer has suggested within the staffing of the information/documentation centre a field officer job to handle such contacts. In addition all ARPC staff and experts who are to perform field tasks in Arab Countries must be briefed also by the documentation - information centre and asked in their job descriptions to perform this activity on behalf of the enquiry service.

II. - INFORMATION BULLETIN / JOURNAL

Publishing a regional packaging review is one of the principal activities of the information and documentation centre.

To simplify the task in the beginning it is to be produced in the form of a bulletin updating readers on latest technologies and developments, industry news, Arab and international event calendar, parts of the Arab experts register , etc ...
At a later stage it can be modified to take the format of a journal.

The bulletin is best published quarterly, however in a future stage it may become bimonthly.

For efficient coverage of most Arab Countries, there must be some 10 agents appointed and receiving a reasonable fee per issue of the bulletin.

To minimise expenses until the bulletin gains momentum and attracts enough advertisements, reproduction can be modest.

Due to difficulties in currency transfer from some Arab Countries it is recommended that the bulletin be distributed for no subscription fee.

The bulletin can be used to disseminate packaging abstracts and lists of articles published currently in foreign journals.

III. - ABSTRACTS SERVICE

It is considered an important activity of the Centre. The main purpose of an abstracts service is to keep company personnel informed of recent developments in a convenient way. Major domestic and foreign packaging journals, new packaging standards adopted nationally and in major foreign markets, books, monographs, company literature, market surveys related to packaging and other published and unpublished sources of current packaging data are regularly reviewed.

It is recommended that the produced abstracts be published bimonthly or even quarterly and to start on a modest scale and slowly progress to more sophisticated coverage and reproduction techniques. However, it is also recommended that a cooperation agreement be concluded between ARPC and one of the experienced packaging institutes like PIRA to purchase their comprehensive packaging and printing abstracts. ARPC can then work on these abstracts to select, to translate and to amend with abstracts processes from other Arab sources and publications.

Photocopying service must be available to cope with expected requests for photocopies of the original articles.

The preparation of bibliographic searches (literature surveys) should be a regular duty of this service and can be done twice a year. Subjects of such searches are chosen in consultation with sectorial Regional Arab Federations (for paper/printing, for food industries, for fertilisers, for cement ...). Bibliographic searches and literature surveys service can be paid for by the concer-

ned Arab regional federation for the benefit of its members.

IV. - PAN-ARAB PACKAGING DIRECTORY (CATALOGUE) /

This is considered another very useful aid to Arab companies in the field; material producers, transformers, users and service suppliers ... It is also useful for people and companies abroad who have or intend to have dealings with the region, it is accordingly to be printed in both Arabic and English languages. It would be a good idea to distribute free copies to Arab embassies within the Arab countries and abroad where they may be consulted by firms seeking sources of packaging services.

The sales price of the directory usually covers the costs of preparation and production whereas surplus, advertising revenues may compensate for expenses of other centre's publications that are disseminated for no fee.

A reviewed edition of the directory has to be published every three or four years.

Collection of the data can be facilitated if done in coordination with other Arab regional organisations AIDO, ASMO and mainly with the national packaging committees, and all ARPC departments in particular field studies personnel.

As a matter of fact the work necessary for the directory can be coordinated with the work for the Dictionary.

P R O C E D U R E

This activity can all be subcontracted to a specialised agency. Alternatively an agreement can be made with a publisher that ARPC contributes the material and the publisher sells the advertising space and looks after final preparation and printing.

The third possibility is that ARPC does the job. In this case the project can be broken down into two stages. First compilation of a directory for Morocco and from the experience gathered, directories for other countries may be attempted.

A proposed procedure goes like this :

- 1/ Collection of as many foreign directories as possible to study their internal organisations, format and contents before deciding the new one.
- 2/ Designing of a preliminary layout of the directory as a guide .
- 3/ Drawing up of a questionnaire.
- 4/ Preparation of a list of adresses to whom the questionnaire is to be sent. Possible sources can be : Ministry of industry, chambers of commerce and industry, trade and technical publications and telephone directories. The list should be prepared on cards to be filed alphabetically. Each card contains the following information :

. Name of the establishment . Full Address

. Questionnaire sent on 1st Reminder on

2nd Reminder on

. Remarks

The questionnaire is sent along with a forwarding letter and the proposed layout of the directory . It may be necessary in some cases to make personal visits to some local industries.

In his final report on a mission in 1979 , the writer elaborated for IMEC a forwarding letter and a preliminary layout of the directory in English and in Arabic.

The compilation of names and following up the questionnaires , etc... in each country can be done on a contract basis through suitable organisation in the country.

Otherwise

- 5/ Formation of a surveying team one member from each country to gather the names, addresses, activities of various establishments in various disciplines of packaging.
- 6/ Each member of the team has necessarily contacts in his country, gather information, classify it and promote advertisement. Each member has to be paid for doing the job.
- 7/ Then a small team of two from ARPC and a secretary collect together, harmonise the input from each country, edit the catalogue in a final form ready for printing.

V. - TECHNICAL DICTIONARY /GLOSSARY /

It is amazing how different the terminology is used among Arab countries. It will not be important only to compile an Arabic / English/French dictionary in the field of packaging but also to include the analogous words for the same thing as used in various parts of the arab region.

This project can be started on the basis of :

a) The technical packaging dictionary published in West Germany (German - French - English - Russian - Italien - Spanish).

An approval from the publishing house may be necessary.

b) The technical terminology arabised by various other bodies in the Arab Countries (particularly ASMO, AIDO, and National Standardisation departments, Arabisation bodies , Universities and Research Centres).

The coordination with all these national and regional bodies will prove most beneficial. Their production has got to be all collected.

The preparation of the dictionary can be carried out by a committee with members from selected countries.

1. First step to make a preliminary classification of the contents into sections as for example, plastics, paper and board, glass , printing, textiles, etc...

2. Each member of the committee takes responsibility

of one section, say for a few months, then the whole committee meets for a few weeks to harmonise the final result.

The collection of available sources in the Arab world and discussions with concerned bodies may need an expert delegated to do the necessary coordination (group leader).

VI. - ARAB EXPERTS REGISTER

A register of Arab experts in all Arab Countries, who have specialised knowledge of specific aspects of packaging (technical, commercial, economic , etc... , and who can help not only the centre but also individual firms.

Parallel with the work in the packaging directory, a list of organisations where technically qualified persons are working will be available.

A questionnaire may be sent to each establishment, institution, centre, etc... with the request that these may be distributed amongst their members for filling up and returning to ARPC documentation Centre. From returns thus obtained plus other information passed by field personnel and experts the register is to be compiled.

VII. - LECTURE REPRINTS AND SEMINAR REPORTS

Priority is to be given to the publication of all seminar reports , lectures and other meetings that the centre sponsors.

This will be very useful to industry because of its specialised and educational nature. This service demands the extension of current reproduction facilities in IMEC (see Extra equipment list).

VIII. - WRITING AND TRANSLATION OF REFERENCE BOOKS ON PACKAGING

Unfortunately there exists no Arabic reference book on packaging to help industrialists and students in academic institutions. At present there are few academic courses on and related to packaging being taught in some Colleges in Arab Countries.

There are also attempts to increase the density of these courses and to introduce balanced packaging courses.

This situation now urges the availability of few reference books in Arabic.

It is suggested during the transitory period to achieve translation of two English language reference books. In the long term new books so much relevant to experiences of the developing countries have to be authorized.

The procedure suggested is to contact an Arab University professor with specialised knowledge of various aspects of packaging to do the job.

It is recommended to choose one book on packaging materials and the other on principles of packaging.

This project is not considered profit-oriented however the cost of reproduction may be compensated for by reasonable sales revenue.

IX. - PROMOTIONAL ACTIVITIES

a/ EXHIBITION

The organisation of a packaging exhibition periodically every three years can be an interesting promotional activity. Timing need to be coordinated with other international exhibitions, and is suggested to be at the very end of the mid-term programme.

It can be run each time in a different Arab Country with facilities to accomodate such event.

The other useful activity is the organisation of group visits to some international exhibitions. Examples are :

Interpack, Düsseldorf Summer 1984, 1987, 1990

Salon d'Emballage Autumn 1984, 1986, 1988

Pakex Summer 1983, 1986, 1989.

The role of ARPC in this case may only be as coordinator. Expenses are to be born by individual persons, or their establishments. ARPC does only the service of organisation of the function and cost of its own personnel.

b/ PACKAGE CONTEST

To promote competitive spirit for achieving excellence in packaging , it is suggested to run a package contest.

However, it is suggested to organise this function only at the end of the transitory period , and after putting the appropriate foundation by implementing activities such as sensibilisation, training, information/documentation , promotion...

It can be run at the same time with the exhibition.

c/ MEETINGS/SEMINARS

To generate collective thinking and attention on packaging problems and to spotlight the role of information/documentation. Two pan-arab meetings are suggested to be related directly to information/documentation in the packaging field.

A packaging expert may speak in the meeting on a specific topic. Discussions are then directed on formation of national packaging Committees and creation of information/documentation nuclei within these committees to constitute the information network.

X. - PREPARATION OF AIDS

a) Films

The production of two educational/promotional films on aspects of packaging. One of which may be on aspects of exportation of fresh fruit and vegetables as the subject interests more than one Arab country, showing the whole cycle from farm to final consumer, in Europe and inherent hazards and constraints. The other film can talk about the promotional and marketing elements of packaging.

b) Slides and other visual aids

These should be relevant to training material and must be prepared in cooperation with training personnel. Slides has also to show experiences from all Arab Countries. This necessitates cooperation of ARPC field studies personnel and experts and also national packaging committees.

Other visual aids include transparencies, maps, samples and scale models.

It is recommended that the information documentation does a good collection of samples from all Arab Countries of packaging raw materials, packages for retail, for transport, for export, etc... and to keep these in a permanent exposition place in ARPC.

SHORT TERMS TASKS

Principal duties related to the execution
of the information documentation activities

Emanating from both the long term objectives and the nature of the programme of activities previously outlined ; the following short-term tasks have to be performed during the transitory period (mid-term programme):

1. - To extend and amend the existing library collection of books, reference books, periodicals and reports, statistics ... etc to cover the new demand by acquiring an extra list (Appendix I).
2. - Expansion of the list of key words (Thesaurus) and reference terms in view of reaching standardisation of systems for documentation, storage and retrieval of Arabic information and bearing in mind future transformation to a computer assisted systems.
It was suggested to IMEC's information staff to get the latest thesaurus typed in a list. This list should then be given to three Arab packaging experts to comment on and adjust as necessary against a small fee.
3. - Assisting in the establishment of packaging information/documentation nuclei (contact points), either associated with national packaging committees or attached to existing research centers or whatever, forming in the end an Arab information network in the field. Associated with this task, two things are necessary :

- . Preparation of a sort of guidelines on establishing a small basic packaging library with indications of the sources of acquisition of the materials.

- . Preparation of guidelines on the formation of national packaging committees.

- 4- . Establishment of a set of country files technical, economic and statistical to contribute to the definition of current status of packaging industries in each Arab Country in the light of scientific analysis of such statistics and facts. Each file may include information on (palletisation, transport, handling and distribution systems, local raw materials and substitutions, tax policy for imported raw materials, experience in material recycling, information on existing packaging plants experts).

- 5- . Collect data on prospective users for ARPC services. To accomplish this, user profile forms are to be sent to industrialists, research and development organisations, government departments, policy makers, planners, engineers, technologists, etc ... The form used previously by IMEC for Morocco is adequate and need only to be arabised.

- 6- . Collect data on experts in various activities, by sending circulars to universities, government departments, professional associations, enterprises and chambers of commerce and industry.

- 7- . Collect information on and establish close contacts with information/documentation centres in Arab Countries.

- 8- . Establish close links with major documentation and information centres in the field abroad in order to utilise their resources. Establish close links also with the Moroccan National Documentation Centre, Rabat. It is indeed useful to establish links also with estimated 400 libraries in the Arab countries consisting of University libraries, national and public libraries, research libraries, government departmental libraries and other special libraries.

- 9- . Collect information on the current periodicals received in existing libraries in the Arab Countries. Prepare out of this information a compilation consisting of an alphabetical list of titles of library holdings, subject, sponsor and country index of the ones relevant to the field of packaging and related industries.

- 10- . Collect economic and statistical data as well as documents on national policies in the field.

- 11- . Collect on regular basis names and addresses of the following type of organisations in Arab states :
 - Institutions of higher and technical education, universities ;

 - Government departments dealing with planning and industrial development ;

 - National productivity and training councils ;

 - Consultancy services ;

 - Research and development institutions ;

- Standardisation and specifications councils ;
 - Industrial enterprises public and private in the field ;
 - Chambers of commerce and industry ;
 - Engineers, chemists and other professional associations ;
 - Packaging committees/ centres in Arab Countries;
 - Arab Regional organisations devoted to industrial development (AIDO, ASMO, ...) ;
 - Arab Regional specialised Centres and Federations (Textiles Centre, Iron and Steel Centre, Food Industry Org. Paper and board Org.).
12. - Preparation of a calendar on forthcoming training events in packaging both in Arab Countries and international ;
 13. - Preparation of a list of scientific and research bodies in Arab Countries indicating their capabilities and facilities to do what type of service relevant to packaging;
 14. - Compilation of the specialists register ;
 15. - Preparation of a list of local firms in each Arab country who are manufacturing any type of packaging machinery ;
 16. - Collection of representative samples from each Arab country of packaging materials and raw materials , retail packages, transport packages, export packages, etc ... for showing in an exposition room.

17. - Collection of :

- . Statistics from Arab statistical bodies ;
- . Studies , reports on the status of the packaging industry (from FAO, UNIDO and Arab specialised organisations and federations ...) ;
- . Experiences of Arab and developing Countries enterprises ;
- . Research reports, surveys and evaluations of local raw materials in each Arab Country;
- . Inventories on machine types and suppliers ;
- . Market researches in export markets.

18.- Compilation of various laws in force in the region in cooperation with the standardisation activity of ARPC ;

19.- Preparation of necessary promotion and training aids (films, slides, others).

20.- Starting the procedure for compilation of the directory and study possibilities of subcontracting;

21.- Starting the process for compilation of the dictionary and investigate viability of subcontracting ;

22.- Follow up with ARPC Field Studies personnel and experts the impact of the enquiry service, and collect from them information on Arab experts in various countries ;

23. - Appoint the bulletin agents and keep contact with them ;
24. - Start contacts with PIRA to conclude an Abstract purchasing agreement ;
25. - Contact Arab regional sectorial federations to determine the priorities for bibliographic search and literature surveys ;
26. - Preparation of lecture reprints and seminar reports for dissemination ;
27. - Decide on which international fairs can be group visited and when and start arrangement at least a year before.
28. - Start making necessary investigations , contacts promotion for the exhibition scheduled 1986;
29. - Start arrangements for the promotional meetings related to information /documentation by preparing a project (date, location, participants, programmes ...) ;

PART VI

EVALUATION OF IMEC EXISTING FACILITIES AND SYSTEMS
IN ITS DOCUMENTATION INFORMATION CENTRE

Sources of Information

Channels of Communications

Local, InterArab; International Cooperation

Extra Equipment Needed

Staff Requirements

EVALUATION OF IMEC'S EXISTING FACILITIES AND SYSTEMS
IN ITS INFORMATION DOCUMENTATION DEPARTMENT.

The second half of this two month mission coincided with a mission in IMEC of another documentation / information expert (Mme. DAVID). In order to avoid repetition of the work and /or overlapping between the two missions consultations and discussions were held with UNDP Assistant representative Mr. DECASTRLE, IMEC's General Manager Mr. BENNOUNA, the packaging studies expert preparing the ARPC Project Document, Mr. SOLTAN and with Mme. DAVID. It was agreed that the writer gives Mme. David background information on the objectives of the Centre, type of users and type of information needed and programme of activities of the proposed information centre so that she considers these elements in her evaluation of IMEC's information departement state. This was done in quite a few meetings held with Mme. DAVID and all the way through cooperation and coordination prevailed.

Quite a few meetings were also held with Mr. SOLTAN and he was given requested information as necessary for the preliminary project document (such as objectives of the information centre, programme of activities, short term duties and additional equipment).

The general conclusion is that the basic systems in use for indexing, classification of documents and processing of information need not be changed at this stage, and that they are adequate for the transitory period and adaptable for the new demand.

However, it might only be necessary to arabise the forms and descriptors. Then later perhaps after putting the system to more intensive use, and on light of any inefficiencies, modification may be imposed.

Definitely, the concept currently in application is correct but unfortunately it has not been tested long enough because of significant shortage of experienced staff.

As regards mechanisation there is presently a preprogrammed mini computer, a word processor or a machine for treatment of text (OLIVETTI 621), in IMEC. The machine has a few possibilities for use :periodical management, cataloging, acquisitions, composition of bibliographic Bulletin, Bibliographic searches.

Unfortunately the machine was never yet put into operation (Commissioning had to be arranged by UNIDO). Obviously the staff when exists will need training on using the machine.

It is suggested that in the preparatory stage (before end 1982) an experienced operator has to be delegated to IMEC for 4 - 6 weeks to run the machine and train IMECS library staff on handling the various possibilities of the machine. This matter is considered an urgency. Unfortunately local agents for Olivetti do not know a thing about the machine and cannot help. That is why it is always recommendable to acquire machines of types that can be easily maintained locally, and be compatible with other machines existing in the country.

Selection and presentation can be improved by using computerised information retrieval systems to cope with the ever increasing flood of information. However the cost of introducing large scale computerised systems in most developing countries would be prohibitive and probably not justified in terms of results. Experience should first be gained in manual methods of documentation. This experience will prove to be invaluable in recognising the many problems concerned with a switchover to mechanical methods. Nevertheless long range planning should be directed towards the eventual conversion to computer operation, when it is considered to be economic.

The Olivetti machine will be quite adequate for ARPC transitory period. Perhaps at the end of the mid-term programme 1986, this particular point may be reinvestigated by a computer specialised expert for one month to study in detail the value of computerisation in ARPC's information centre on light of the volume of the activity at that time and to study in detail the type of computer outfit to be installed, which will be compatible with whatever existing at the time in AIDO and Arab League information Centres and taking into consideration a computer Arab Norm being currently worked on by ASMO.

TRANSLATION

At the moment there is no translation capacity in IMEC. A new translation service must be created with the beginning of the transitory period, from English to Arabic and best if English and French to Arabic. Exchange systems between Arab Countries must however be organised to avoid duplication of translation in various countries.

SOURCES OF INFORMATION

- BOOKS : As a rule books contain broader information and supply comprehensive range of scientific and production problems.
- PRIMARY : Scientific and technical documents reporting directly on results of research , experimentation and design. Dissertations, articles in periodicals, Journals and Newspapers, in addition to patents, Standards, Trade Catalogues, Conference proceedings and most importantly unpublished reports belong to this category.
- SECONDARY : Documentation prepared by processing primary documents. Annotations, abstracts, digests, specialised information, bibliographic references and indexes, surveys and state of the Art reviews belong to this category.

REFERNCE BOOKS, MONOGRAPHS, AND REPORTS

The collection of text books currently existing in IMEC was examined and discussed. The conclusion was that it is far from being comprehensive to satisfy neither IMEC requirement nor future ARPC requirements.

As could be expected the library in general is a French language oriented library which is very normal for Morocco. However for ARPC the need will definitely arise for variations to Arabic and English sources. Unfortunately there will be little technical reference material on packaging and related subjects in Arabic.

It is necessary that the Information / Documentation Centre issues and distributes a list of its available reference books, periodicals, reports, etc..., in order to assure more intensive use of the available materials.

Comprehensive complementary list had been prepared by the writer and included in his final report of a mission in 1979 on packaging education and training in Morocco. This included :

- . Details on major training materials published by some other packaging institutes and organizations.
- . A comprehensive list of 161 reference books, monographs and reports. A selected priority list for acquiring by IMEC during the transitory period is given in appendix II. When placing an order, the latest edition should always be requested.

PERIODICALS

The current list of periodicals in IMEC was also examined and discussed. It was noticed that :

- a - it almost contains no periodicals on printing and on marketing and advertising,
- b - some other areas need to be strengthened such as paper, plastics, tin applications,
- c- periodicals from Arab organisations and research centres are to be sited and regularly collected.

An additional list of periodicals is proposed in Appendix II.

In appendix II, there is a compilation made out of published literature where industrial information can be found. Additional sources classified nationally and internationally are also included in this appendix.

CHANNELS OF COMMUNICATION

ARPC should announce the availability of its publications through a publication list to be mailed to its mailing list of potential users.

When information is disseminated to industry, the established channels of communications should be used - for example, those maintained by the national packaging committees, Arab Federation for Paper, Board and Printing, Arab Federation for Food Industries, ASMO, AIDO, other specialised centres and organisations , Ministries of Industry, Governmental or semi-public agencies (Productivity , Development and Promotion Centres), Chambers

of Commerce and Industry, Professional Associations and Engineering Societies.

All these bodies have usually built up communication systems of their own for the distribution of information through publicity campaigns, announcement bulletins, newsletters, circulars, conferences and meetings.

However, personal contact still appears to be the most effective means of communication in transferring information to those who need to put it to practical use. This can be performed through field visits by the person responsible for the Information /Documentation Centre and through performance of ARPC's other activities in member countries (such as training courses, seminars, technoeconomic studies , etc...). The person responsible for the event has to make the contact on behalf of the Information /Documentation Centre.

The audiovisual media of television, radio and particularly the presentation of technical films have tremendous potentialities for communicating information for industrial application in developing countries. ARPC should therefore be equipped with films to be shown at relevant meetings.

INTER ARAB AND INTERNATIONAL COOPERATION

To achieve its goals most efficiently and at reduced cost ARPC has to cooperate nationally and internationally.

In Morocco

With the CENTRE NATIONAL DE DOCUMENTATION (C.N.D.), Rabat. A visit was made to this centre and possibilities of cooperation were discussed. The future Information Centre may make use of either :

a) its computer terminal connection with Europe and America ;

and /or

b) its reprographic unit and microfiche production facilities.

INTER ARAB COOPERATION

With Universities, Research Centres, National Packaging Committees, Government agencies concerned with packaging , Arab Professional Associations, Regional Sectorial Federations (Paper and Printing, Food Industries , Information Centres...).

INTERNATIONAL COOPERATION

- § - With other developing countries (for example Latin American Packaging Organisations).
- § - With developed countries (Packaging Organisations , for example : EPA, WPO, other packaging institutes and information centres, organisations concerned with packaging standardisation.
- § - With UN Organisations , for example : UNIDO, ITC, FAO, UNESCO ...

EXTRA EQUIPMENT NEEDED

No effort should be spared to acquire equipment possibly through local dealers. This offers many advantages as regards servicing and repairing and future enlarging of the facilities.

Compatibility of equipment or similarity with what is existing in other institutes CND for example is useful. When the electronic data processing starts the view point of compatibility becomes even more important with configurations in AIDO, Arab league and other regional centres.

Copying devices and printing facilities have to be the latest models available. It is recommended to hire rather than buy a XEROX photocopier.

As regards computer no provision has been made in this list. Careful screening of different aspects should be done by a special UNIDO Consultant to be recruited only for this purpose when time comes.

Machines accessories and spare part should be taken care of within the order and sufficient supplies for operating the first year.

Full and clear specifications have to be laid down for each machine before ordering.

Only equipment of immediate need are included in the estimated budget. However for the full scale project a complete small offset printing outfit with facilities to prepare the plates will be needed, an estimate cost \$US 100 - 150,000 .

Extra Equipment Needed

Serial	Quantity	Type of Equipment	Estimated Cost £
1	2	Electric typewriter with Arabic keyboard IBM or else	9 000
2	1	Addressograph Machine with Memory	10 000
3	1	Xerox Photocopying machine with facilities of reductions and suitable for copying from books as well as single sheets on normal paper.	Rent for 4 years 8 000
4		Books racks and card boxes and filing cabinets	5 000
5	1	Stencil duplicator size 24 x 33 cm	10 000

S T A F F

The impact of the industrial information service depends on the competence and dynamism of its staff. To make the service an instrument of real use to industry, it is essential that the staff understands the problems and aims of industry. Consequently, the background and experience of the personnel should be of an industrial rather than a scientific or administrative nature.

Two types of personnel are however needed :

. Field officers whose task it to initiate and maintain direct contacts with the consumers of information in industry.

. Other staff whose task is to screen and process information material, evaluate incoming inquiries, make literature searches and prepare answer files. Ideally the staff in the office should consist of engineers and librarians : i.e. they should be experts in documentation able to handle technical problems in Arabic and English or French.

The field officer should preferably be an engineer with extensive industrial experience and with a good understanding of business administration. His qualifications and status should be such that he can discuss with authorities, managing and technical directors the issues at stake and help them to make decisions - Otherwise the information no matter how good cannot be assimilated and put to productive use. He should be able to speak fluent Arabic and English.

It is to be noticed that inexperienced engineers would be at a considerable disadvantage in working with the management of industrial enterprises. However the staffing of industrial information services is usually hampered by the lack of adequate personnel with a combined background in technology, business management, documentation and public relations.

Permanent staff requirements

1. It is urgently required first to staff the existing IMEC Information/ Documentation department where it is significantly understaffed.

Planned personnel for IMEC Information/Documentation Department were according to original design of the service as follows :

- 1/ Engineer, Chief of Dept.,
- 1/ Journalist
- 1 / Documentalist
- 2 / Analysts
- 2/ Assistants

2. In addition to the above the following additional personnel would be needed for the transitory period (aid-term programme) :

One Head of the Documentation/Information Centre

- . Responsibility for the planning, supervision and follow up of the centre's activities.
- . Coordination with other departements and particularly with techno-economic field studies personnel and participation in the planning and follow up of the field studies.
- . Personal contacts with users also promotional activities .
- . Responsibility for Publishing the Abstracts .
- . Contacts with Arab and international organisations.

. Other tasks

Qualifications : A chemical Engineer with extensive industrial experience and good understanding of business administration and good knowledge of Arabic as well as English languages.

. One Translator

Duties include :

. Translating texts from English and French to Arabic.

•Participation in preparation of the abstracts

. Other tasks

Qualifications : An appropriate university degree with good experience in technical translation and mastering the Arabic and English languages.

. One Journalist

Duties include :

. Full responsibility for the bulletin and all other publications of the Centre.

. Participation in other tasks

P A R T VII.

- A/ IMPLEMENTATION AND FINANCING SCHEDULE
OF THE MID-TERM INFORMATION ACTIVITIES

- B/ EXPERTS REQUIRED FOR THE INFORMATION
CENTRE AND THEIR RECRUITMENT SCHEDULE

One Secretary

Duties include :

- . Arabic typewriting
- . English typewriting
- . Filing
- . Participation in the preparation of the enquiries answering files
- . Other tasks

Qualifications : Excellent ability and speed in both Arabic and English typing. Perfect knowledge of Arabic and preferably English too.

3. For the full scale project the following additional jobs would be needed :

One librarian

Duties include :

- . Full responsibility for the abstracts
- . Participation in answering enquiries

One librarian junior

Duties include :

- . Assisting the journalist in the publication activity of the Centre (Bulletin, Directory, etc...)

One Translator

with other duties in the Centre.

A - MID -TERM ACTIVITIES 1983-1986

A N D

IMPLEMENTATION AND FINANCING SCHEDULE

ACTIVITY	IMPLEMENTATION SCHEDULE				FINANCING SCHEDULE				TOTAL FINANCE (4 YEARS) \$	FINANCIER
	1983	84	85	86	83	84	85	86		
Packaging Directory (Printing expenses not included)	*	*	*		5	10	5		20 000	
Experts Register		*	*			3	7		10 000	
Packaging Dictionary/Glossary (Printing expenses not encl.)	*	*	*	*	8	15	7	5	35 000	
Enquiries/Answering Service including field visits in 85,86	*	*	*	*	2	3	5	5	15 000	
Publication of two Arabic reference books	*	*			30	30			60 000	U N D P (included with experts)
Abstracts publication	*	*	*	*	5	10	10	10	35 000	
Bulletin publication		*	*	*		30	20	20	70 000	
Lecture reprints & Seminar reports.	*	*	*	*	2	2	3	3	10 000	
Two information promotional meetings		*	*			15	15		30 000	
Exhibition (Only promotion and preliminary expenses, Exhibition suggested in 1986)		*	*			20	20		40 000	

67

ACTIVITY	IMPLEMENTATION SCHEDULE			
	83	84	85	86
Contest (Only promotion & judgement fees)				*
Aids (films + Slides+...)	*	*		
Extra equipment	*	*		
Books & periodicals	*			
Thesaurus Study	*			
Formation of doc/info Nuclii (with formation of national packaging committees)	*	*	*	
Personnel	*			
Experts				
. Senior Experts	*	*	*	*
. Junior Experts	*	*	*	

FINANCING SCHEDULE				TOTAL FINANCE (4 YEARS)	FINANCIER
83	84	85	86		
			10	10 000	
20	15			35 000	
29	8			37 000	U N D P
2	2			5 000	U N D P
7				7 000	
35	15			50 000	
				469 000	
50	100	100	100	350 000	Can be input in Kind as participation from Arab governments.
51	44	7	14	106	} U N D P
15	15	15		45	

**B - EXPERTS REQUIRED FOR INFO / DOC CENTRE
AND THEIR RECRUITMENT SCHEDULE.**

EXPERT	1983												1984												1985												1986											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
SENIOR EXPERT (General Organisation and breaking down specific tasks, arrive only after appointing the head of the Department).																																																
JUNIOR EXPERT (Specialist in Abstracting and abstract reproduction, helps also in running the enquiries service and starting the catalogue, dictionary and experts register)																																																
JUNIOR EXPERT (Specialist in Bulletin editing and reproduction helps also in running the enquiries service and starting the catalogue, dictionary & experts register.																																																
JUNIOR EXPERT (specialist in journals publication, to work in the transformation of the bulletin into a journal format, assist with other activities).																																																

EXPERT	1983												1984												1985												1986											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
<u>SENIOR EXPERT</u> (Evaluation of progress).																																																
<u>SENIOR EXPERT</u> (formation of national info. nuclei within national pkg committees)																																																
<u>SENIOR EXPERT</u> (writing of two reference books).																																																
<u>SENIOR EXPERT</u> (information promotional meetings two weeks)																																																
<u>SENIOR EXPERT</u> (Information promotional meeting, two weeks each)																																																
<u>SENIOR EXPERT</u> (Investigation of computerisation)																																																
SENIOR EXPERT	9 MONTHS												8 MONTHS												1 MONTH												1 MONTH											
JUNIOR EXPERT	3 "												3 "												3 MONTHS																							

S U M M A R Y

=====

... TOTAL ESTIMATED BUDGET \$ 980.000

... INPUTS

1) U N D P : EXPERTS 161.000
EQUIPMENT 37.000
BOOKS 5.000

203.000

=====

2) -ARAB GOVERNMENTS)
- A I D O)
- REGIONAL SPECIALISED CENTRES) 777.000
- ARAB REGIONAL FEDERATIONS)
- ARAB FUNDS)



OUT OF WHICH STAFF CAN BE "IN KIND" PARTICIPATION
SO RFST WILL BE \$ 427.000



APPENDIX I.

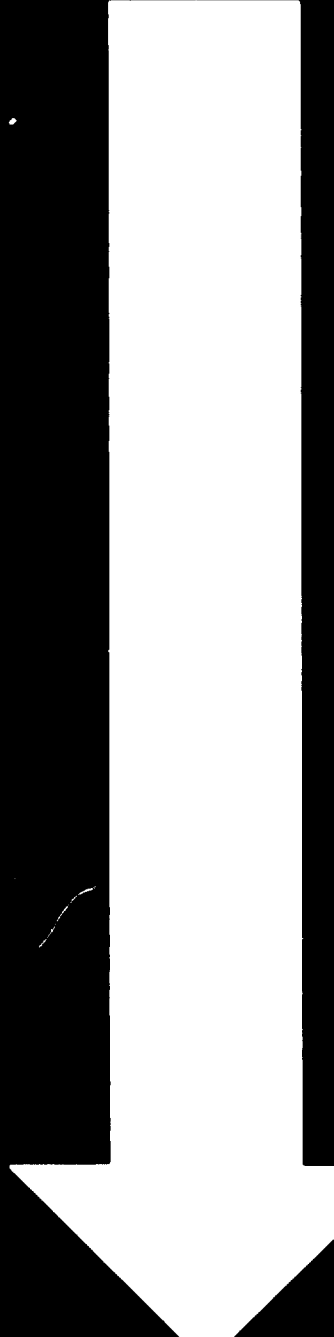
RECOMMENDED ADDITIONAL PERIODICALS
REFERENCE BOOKS, MONOGRAPHS AND
REPORTS

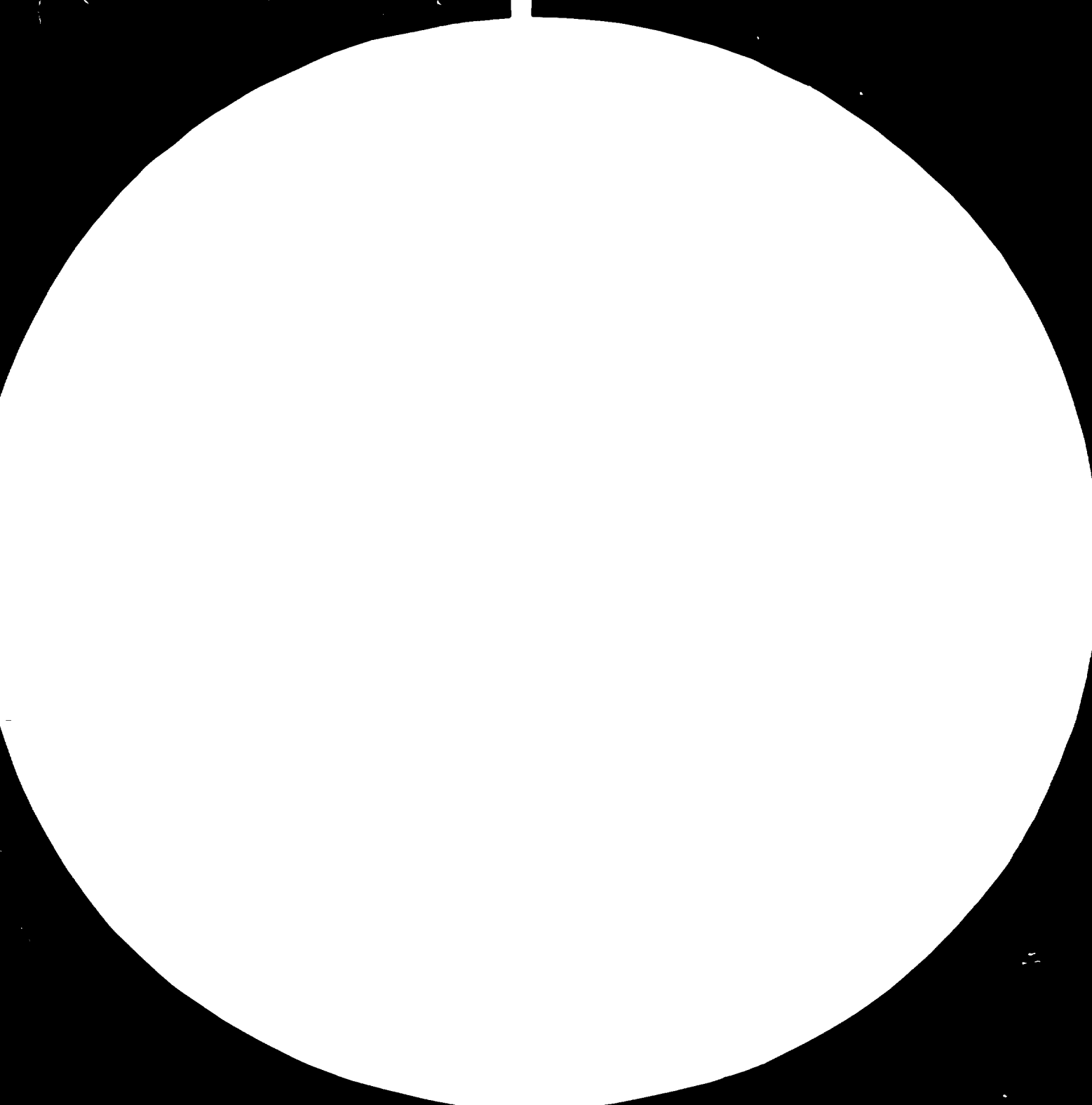
A PROPOSED ADDITIONAL LIST OF PERIODICALS

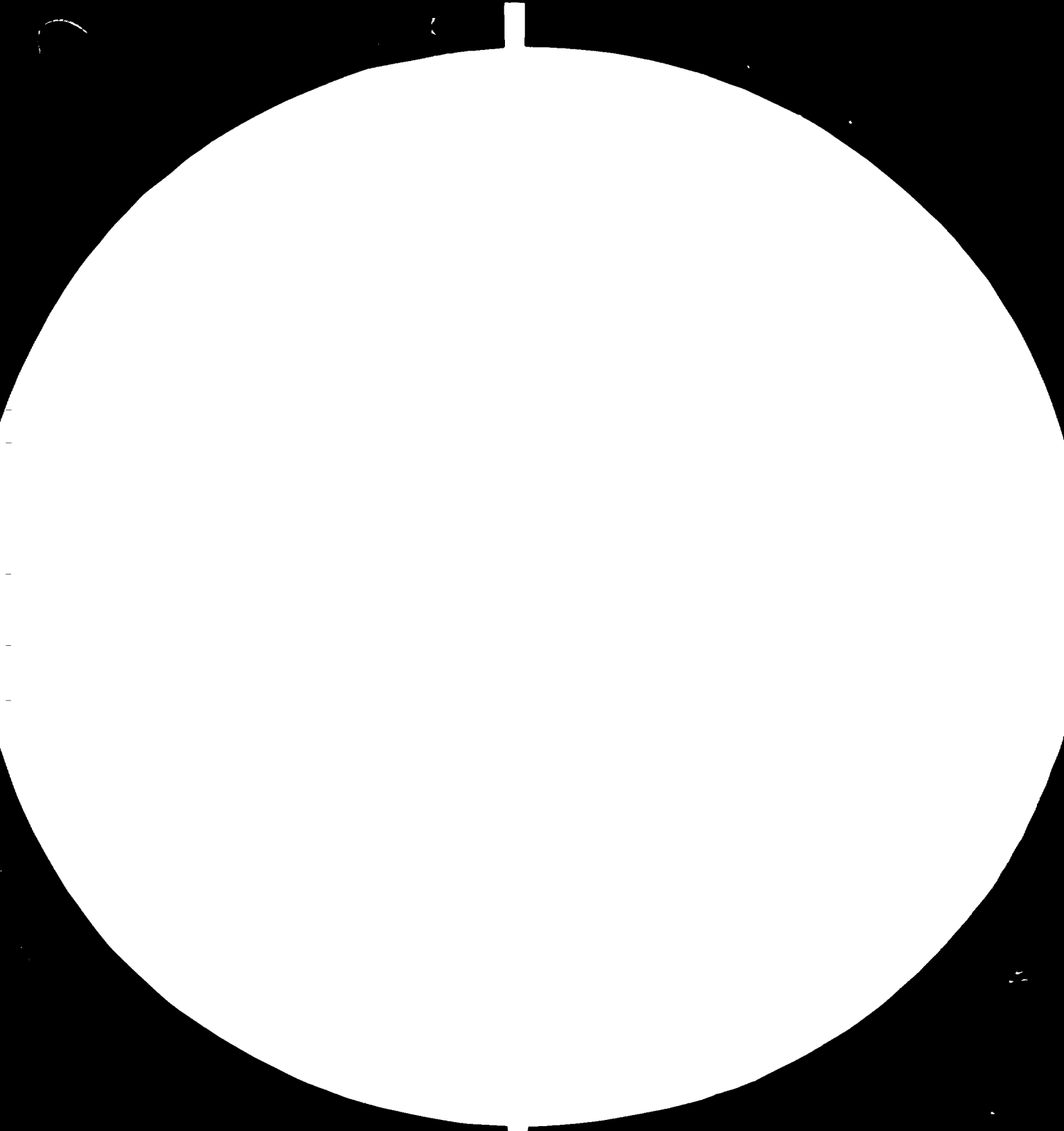
- 1/ Advertising and marketing
- 2/ Industrial marketing
- 3/ Converter
- 4/ Paper technology
- 5/ Paper facts and figures
- 6/ American ink maker
- 7/ Canadian printer and publisher
- 8/ Printing technology
- 9/ Pira packaging Abstracts
- 10/ Pira packaging Journal
- 11/ Pira printing Abstracts
- 12/ Container
- 13/ Modern packaging
- 14/ Inst. of Packaging Journal
- 15/ Industrial design
- 16/ Chemical and Process Engineering
- 17/ Education and Training
- 18/ J..of documentation
- 19/ Tin printing and box maker
- 20/ Tin and its uses
- 21/ Canning and Packaging
- 22/ British plastics
- 23/ Periodical ASMO Publications
- 24/ Periodical AIDO Publications
- 25/ Periodicals from other Arab organisations
and research centres.

- 26/ Adhesive age, monthly , Palmerton Publ. , USA
- 27/ Asian Packaging, bimonthly, Asian Packaging Federation , Japan.
- 28/ Tarashii Hosol (New Packaging), monthly, Nihon Hoso Times, Co, Japan.
- 29/ Australian Packaging, monthly , IPC, London.
- 30/ Canadian Packaging, monthly, Maclean Hunter Publ., Toronto.
- 31/ Diemaking, Die Cutting and Converting, monthly North Am. Publ., USA
- 32/ European Packaging News, quarterly, SEPIC, France.
- 33/ Flexography, Printing and Converting, monthly North Am. Publ., USA.
- 34/ I. of Packaging, monthly, Techn. Publ. , Indian.
- 35/ Packaging , monthly , National Technical library and doc. Centre, Budapest.
- 36/ Packaging Design, quarterly, R.C., Publ. Inc. , USA.
- 37/ Packaging India, monthly, IIP, India.
- 38/ Paper, Film and Foil converter, monthly , Peacock Bus. Press, USA.
- 39/ World Packaging, quarterly, WPO Hong-Kong.

22 IQ 28









28



32



40



1.8

Microcopy Resolution Test Chart, NBS 1963-A, 28 Lines/Inch

U.S. GOVERNMENT PRINTING OFFICE: 1963

A PROPOSED ADDITIONAL LIST OF TEXT AND REFERENCE

BOOKS, MONOGRAPHS AND REPORTS

(a) Major training materials published by some other packaging Institutes and Organisations :

- . PAC Audiovisual Course in Packaging (CANADA)
- . PIRA Visual aid kits (ENGLAND)
- . Self instruction Manuals of PIRA (ENGLAND)
- . Packaging /Converting Machinery Components training course and manual (PMMI, USA)
- . Self instruction courses on trouble shooting industrial machinery, lubricating industrial machinery, product filling (PMMI, USA)
- . Correspondence Courses in Packaging (Inst. of Packaging, ENGLAND)
- . Audiovisual Course in Packaging Technology and Promotion (ITC/ UNIDO)
- . Pulp and Paper training via videotape (CANADA)
- . Blue print for package education (EPF)
- . Syllabus for an Indian Full three months Course (IIP, INDIA.)
- . Proceedings of Conferences by the Inst. of Packaging (ENGLAND)
- . Texts of Courses given by EPDA (EGYPT)

(b) The following comprehensive list covers a wide spectrum of the field , and although it is considered adequate for the moment, it has to be continuously amended with new books' and reports. A Summary of the contents of each, can be referred to in the writer's Report I979.

1. Principles of food Packaging, R.HEISS, FAO
2. Food Packaging S.Sacharow and R.Griffin, AVI. Publ.
3. Fundamentals of packaging, F.Paine, Inst. of Pack. UK
4. Packaging Materials and Containers, F.Paine, Inst. of Packaging, UK
5. Handbook of Package Engineering, I.Hanlon, Mc.Graw-Hill
6. Industrial Packaging , F. Walter et al, Robert Krieger Pub. USA.
7. Package design Engineering, K. Brown, R. Krieger Publ. USA
8. Package printing, R. Long, Graphic Magazines Inc, USA
9. A Complete Course in Canning, A. Lopez, Food Production USA
10. Memento de l'Emballage et du Conditionnement , Editions Industrie et Commerce, FRANCE.
11. Tout l'Emballage, Georges Pochet, Les Editions d'Organisation , FRANCE. Vol I., II, III, IV.
12. Emballages et Conditionnement d'Aujourd'hui, R. Lefaux, Librairie des Industries et Techniques, FRANCE.
13. Le Conditionnement et l'Emballage dans la Conception du nouveau produit, P. Michel, Dunod Editeur, FRANCE
14. Wood as a packaging material in the developing Countries, B. Hochort , UNIDO
15. Cahiers du Centre Technique du Bois, FRANCE.
16. Les Emballages en Bois, Les Editions Techniques Patronales, FRANCE.
17. Handbook on pulp and paper technology, K. Britt, Reinhold Publ. USA.

18. Paper and Paperboard in Packaging, IIP, INDIA
19. Cartonnage, Dossiers d'Emballages, FRANCE.
20. Source Book of fundamental resins for packaging , Pack. Inst., USA
21. Basic guide to plastics in packaging, Sacharow and Griffin, Cahners Books, USA.
22. Sources of information on plastics, the plastics Inst., UK.
23. Flexible packaging of foods, A. Brody, Newnes - Butterworths, UK.
24. Plastics in contact with food, J. Briston and L. Katan, Food Trade press, UK.
25. A Guide to thermoformed plastic packaging, S. Farnham, Cahners, USA.
26. Polyethylene in Packaging, IIP, INDIA.
27. Guidelines for shrink packaging, Packaging Centre, AUSTRALIA.
28. Cellulose and Cellulose Film in Packaging, IIP, INDIA
29. Les Matières Plastiques dans l'Industrie Alimentaire, R. Lefaux, Publications Techniques Associées, FRANCE.
30. Plastic films and Packaging, C. Oswin, Halsted Press, USA
31. Packaging with Plastics, P. Bruins and Gordon /Breach Sci. Publ. , USA.
32. Packaging in Glass, B. Moody, Hutchinson Publ. UK
33. Glass Containers in packaging, IIP, INDIA
34. Tinfoil in packaging, IIP, INDIA
35. Practical Canning, A. Locke, Food Trade Press, UK.
36. Aluminium in Packaging , IIP , INDIA.
37. An introduction to Adhesion and Adhesives, PIRA Visual Aid Kit, UK.
38. Source Book for closures, Packaging Inst. , USA.
39. Timber pallets - A Market survey, A. Chacon and N. Martyr Timber Research and Dev. Assoc. , UK.
40. Packaging Note Book, Food Processing Machinery and Supplies Assoc. , USA.

41. Machines de Conditionnement et d'Emballage ,
Dossiers d'Emballage, FRANCE.
42. Economic Considerations on packaging in
Developing Countries, TTC, GENEVA.
43. Economic Factors in Packaging Design, J. Mac Chesney
and A. Jones, Wolpert and Jones (Studies) Ltd.
44. Introduction to the economics of packaging, E.Leonard
Mc. Graw Hill.
45. Packaging specs, purchasing /QC, E. Leonard, Modern
Packaging Magazine, USA.
46. Checklist for the planning of export packaging, ITC
GENEVA.
47. QC Handbook, J.Juran, Mc. Graw Hill, USA.
48. The economics of vegetable prepacking, Wi Hinton,
Agricultural economics unit. , Univ. Of Cambridge, UK.
49. Handling of Canned Fruits , National Materials Handling
Bureau, AUSTRALIA .
50. Potato Handling, National Materials Handling Bureau,
AUSTRALIA.
51. Dates - Handling, Processing and Packaging, V.Dowson
A. Aten, FAO.
52. Packages and Packages Materials for fish , OECD, FRANCE.
53. Fish Handling and preservation, OECD, FRANCE.
54. Packaging of Dairy Products, A. Jones, Wolpert and Jones
(Studies) Ltd, UK.
55. Milk Packaging, A. Jones, Wolpert and Jones, UK
56. Packaging of Pharmaceuticals, C.Ross, Newnes, Butterworths,
U.K
57. Conditionnement des Produits Pharmaceutiques , Dossiers
d'Emballages, FRANCE.
58. Packaging of Chemicals and other industrial liquids and
solids, C. Swinbank, Newnes - Butterworths, UK
59. Petroleum packaging Notebook, Packg Inst. , USA.
60. Marketing fruit and vegetables, J.Abbott, FAO.
61. Packaging of cosmetics and toiletries, J. Mac Chesney
Newnes - Butterwoths, UK.

62. Packaging Management , J. Briston and T. Neill, Management book Services, UK.
63. Le management dans l'emballage , A. Brody , In Emballages, April 1971, FRANCE.
64. Packaging : a scientific marketing tool, E.Raphael Michigan state Univ. Book Store, USA.
65. The silent salesman, I. Pilditch, Business Books Ltd, UK.
66. Packaging is marketing, L. Guss, American Management Assoc. USA.
67. Colour sells your package, J.Favre, ABC Verlag, ZURICH.
68. Package design and its management, Am. Management Assoc.USA.
69. Consumer-oriented packaging , Am. Management Assoc., USA.
70. The uses of imagination in packaging, Am. Management Assoc. USA.
71. Using colour to sell, E. Danger, Gower Press, UK.
72. Graphics for packaging designers, PIRA Kit, UK.
73. Distribution and Transportation Handbook, Cahners Book, USA.
74. Physical distribution for export, D. Tookey, Gower press,UK
75. Emballage industriel d'expédition, Dossiers d'emballages, FRANCE.
76. Unitised transport, J. Lamain, Unit Load Council, OSLO.
77. Unit load handling, M. Hulette, Cahners Publ. , USA.
78. Packaging evaluation - F. Paine, Newnes-Butterworths, UK.
79. Standardisation of fruit and vegetables - Technical and Economic Aspects OEDC, PARIS.
80. Establishing Standardisation of Plastics in Developing Countries, UN Publication.
81. Packaging and the law, F. Paine, Newnes Butterworths, UK.
82. Food labelling, National Cannery Assoc. USA.
83. Handbook of Statistical Sources, PIRA, UK.
84. All relevant UNIDO Publications.
85. All relevant ITC Publications.
86. Printing ink manual, F. Askew, London.
87. Handbook for graphic communications, USA.
88. Reference encyclopedia package printing techniques and

APPENDIX II.

. WHERE CAN INDUSTRIAL INFORMATION BE FOUND ?

. ADDITIONAL SOURCES OF INFORMATION CLASSIFIED
NATIONALLY AND INTERNATIONALLY

equipment North Am. Publ. USA.

89. Established Standardisation of Plastics in Developing Countries, UN.
90. Export Promotion by private sector organisations, ITC, GENEVA.

WHERE CAN INDUSTRIAL INFORMATION BE FOUND ?

- a/ Specialised reference books, handbooks, bibliographies,
- b/ Specialised news agencies and information bulletins,
- c/ Abstracts journals, abstracting and indexing services ;
- 3/ Scientific publications , dissertations ;
- e/ Company and bank reports and bulletins , reports of Chambers of Commerce and Industry ;
- f/ Patent specifications published as booklets which provide much info.on new techn. processes.
- g/ Official gazettes, publications of statistical and standardisation offices ;
- h/ Surveys, experts reports, feasibility studies .
There must be hundreds of reports and studies been produced during the last few years dealing with industrialisation problems in developing countries. They constitute a valuable source of industrial information for these countries and should not be overlooked.
- i/ Catalogues, price lists, prospectuses, directories, tradijournals ;
- j/ Industrial films, technical films, also used for training purposes are an efficient way of keeping engineers and technicians informed about new developments ;
- k/ Meetings , workshops, seminars are another type of information activity , their value depends very much on the quality of the papers , the lectures and participants.

- 1/ Fairs and exhibitions - Industrial fairs and exhibitions have developed more and more into an international exchange of experience and serve to initiate contacts . Industrialists and Government chiefs should have the opportunity to visit one international fair every year.

ADDITIONAL SOURCES OF INFORMATION CLASSIFIED NATIONALLY
AND INTERNATIONALLY.

LOCALLY AND NATIONALLY :

- Reference books, periodicals, newsletters, etc...
existing in other libraries and printing, for
food industries, etc...
- Files of public or private export promotion
organizations Departments of Trade and Commerce.
- Files of national packaging Committees, industrial
and food research institutes.
- Files of national standards organizations, Chambers
of Commerce and Industry, etc.. and Statistical bodies.
- Data available though big international banks with
branches in many countries such as citibank, Barclays,
etc...
- Data available from local embassies of foreign countries ;
- Data available through local advertissing agencies with
international connexions .

ABROAD

- Departments of Trade, Commerce, Agriculture etc... in
target markets.
- Own embassies, trade representatives , etc... abroad.
- International organizations such as UN Agencies International
Standardisation Organization (ISO), Int. Packaging and Trade
Organizations, European Economic Community (EEC) ;

- Packaging Institutes and Industrial and Food Research Institutes, etc... in target markets.
- National Standards Institutions and Chambers of Commerce in target markets.
- Agents and Customers abroad.

