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07618



Distr.
LIMITED

ID/WG.255/4
18 July 1977

ENGLISH

United Nations Industrial Development Organization

Third Regional Meeting of Arab
National Packaging Committees

Casablanca, Morocco, 24 - 27 October 1977

ORGANIZATION OF THE REGIONAL PACKAGING CENTRE^{1/}

by

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id.77-4844

I

Organization of the Regional Packaging Centre in the

view of changing economy of Arab Countries.

1. The growth and diversification of industrial production continuously generate new requirements in packaging techniques and packaging materials. The growing role of packaging in improving export potential has also been recognized and appreciated by many Arab countries.
2. At the same time packaging itself is a developing industry. One of the consequences of the process of industrialization is the development of new techniques and application of applied science to the technology of packaging for all types of food consumer goods and products.
3. It is expected that the total production of the Arab countries associated with IDCAS will increase more than 100 per cent in the period of the next 20 years.
4. An evaluation has shown that approximately 25 to 50 per cent of the supply ^{of food} is damaged because of insufficient packaging.

Taking into account all these elements at the Second Regional Meeting held in October 1975 in Alexandria has been decided to undertake the necessary steps for development of packaging industry in each Arab country and to establish Regional Packaging Centre.

Organization of the Regional Packaging Centre should be

the function of the needs and programme in this field.

There are 4 fundamental functions of the package:

- Protection of the product against hazards from the production line to the consumer to avoid heavy losses and damages especially in food products.
- Identification of the product and promotion of the export

through /attractive/ right packaging.
- Application of the national raw materials and introducing

the substitutes to reduce the costs of packaging.

- Rationalisation of transport and storage of commodities.

To achieve these goals, following group of activities should be developed:

- marketing functions
- technology problems
- standardization
- information systems
- training
- international cooperation / also in the form of industrial cooperation/

To ensure proper development of these problems institutional organization is indispensable both from the

- national point of view and
- on regional level

All these elements have a direct influence on the organisation and structure of the regional Centre.

Long term objectives

1. Industrialization of the Arab countries should play an important role in the establishment of the New International Economic Order elaborated and accepted by UNO. One of the prime factors in the process of industrialization is packaging industry. In the broad sense there is no product, agricultural or industrial, that is not packed; therefore the parallel development of the packaging industry in accordance with the development of industries in other sectors is essential, if industrial progress is to be made. It is of little value to produce goods which are damaged in handling, transport or storage because of insufficient packaging. The key to the solution of these vital problems lies in the development of packaging industry.

The function and importance of packaging in the national

economy is very relevant to the social and economic

development of a country.

2. Therefore long-range objective is to accelerate the existing industry and initiate a quick development

of packaging industry in the right proportion with the general industrialization of the country and regional framework of IDCAS community.

3. To promote export of goods and to ensure that the maximum amount of food processed is delivered in good condition to consumers /home and on the international market/.
4. To introduce fully economic packaging systems, using local raw materials, introducing substitutes and deliver the products according to the national and international health regulations.
5. The institutional concept is of particular importance in the development of medium-scale and small-scale industries which should be supplied with the modern technologies.

III

Immediate Objectives

1. To introduce most suitable packaging system.

The abundance of existing packaging technologies and processes, many of them based on most sophisticated materials and techniques, make the appropriate choice difficult and rather impossible without the proper knowledge and approach to this problem.

To introduce new methods of packing a determined packaging system must be chosen, namely a comprehensive solution from ----- the technical and economic point of view including the most suitable packaging materials, machines and installations for forming, filling and sealing packages, available manpower, marketing elements, production costs etc.

Such solution seriously affects the economical aspects

of the entire venture and new investment possibilities.

2. To establish unified testing methods for packaging materials and packages in all countries of the region.

If every country would like to elaborate its own testing methods, it will cost lot of time and money. The lack of knowledge will hamper such an individual solution.

3. Information System /information bank/ as an important

element of technology transfer.

Information constitutes an important element of every National Packaging Centre's activity. Regional Centre should be the bank of information for the local organizations.

Therefore one of the basic fields of activity of the Regional Centre should be information services.

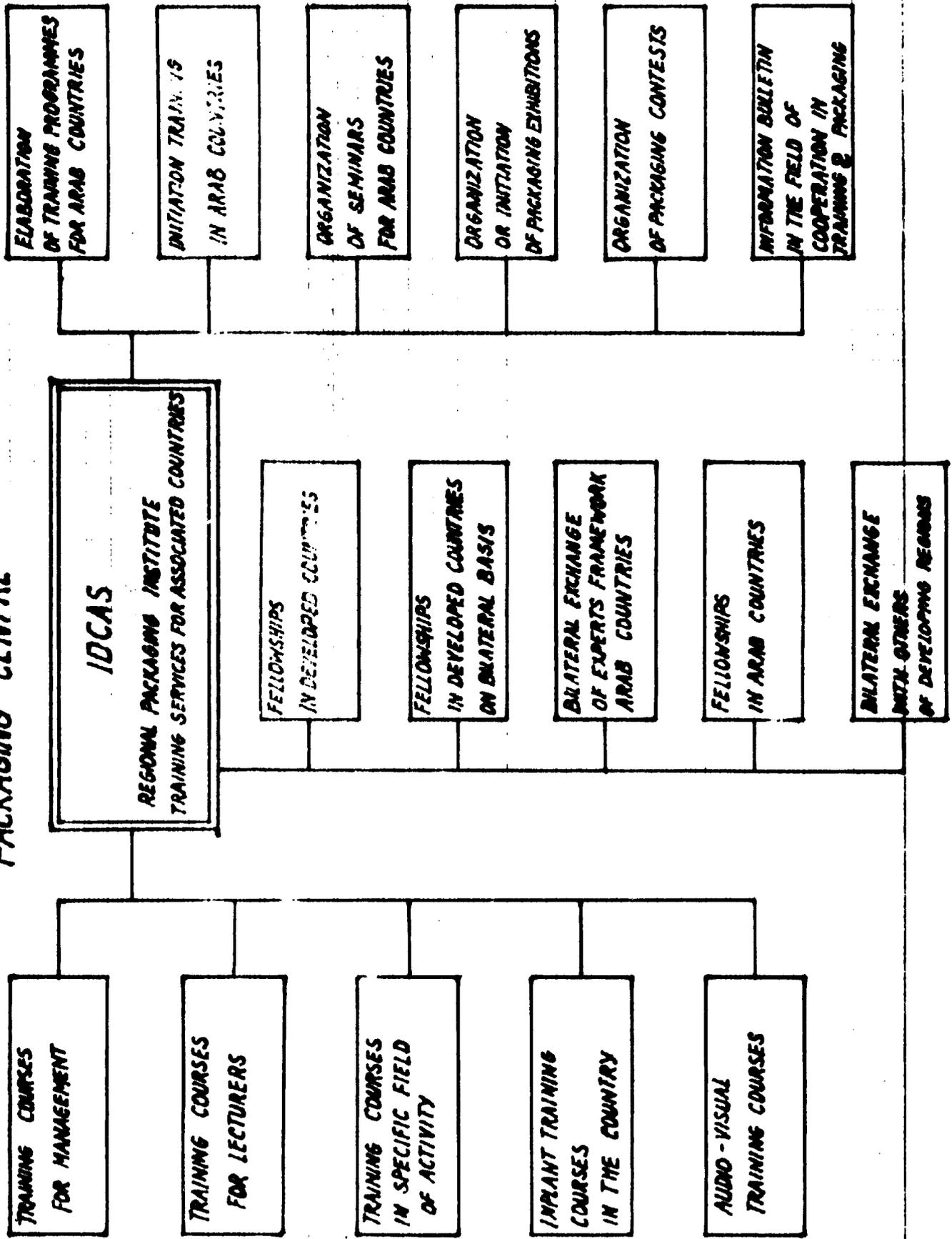
The following information should be collected:

- current information about existing technologies,
- new technologies in packaging,
- new inventions in this field,
- information about patents,
- specific information needed to the development of packaging industry.

4. Training, Exhibitions and Contests.

- As a mean to upgrade knowledge of packaging in the Arab countries it is indispensable to hold training programmes, seminars, group meetings, exhibitions and contests.
- Training programmes should be made suitable to various levels of management including producers, users, consumers and others. It should help in the promotion of trade, proper and economic use of packaging materials and methods.

TRAINING SERVICES IN REGIONAL PACKAGING CENTRE



- Regional seminars, contests and exhibitions would further assist in the improvement of packaging status, not only in the respective countries, but also in the Arab region as a whole.

5. Consultation and advisory services.

No company or group, small or large, can be self-sufficient in assessing and meeting information needs. The task is how to ensure information quality. This means optimising the selection, timing, presentation and cost.

Management makes decisions on many different questions: how to implement new technology, how to boost productivity by effective use of resources, how to plan capital investment, how to exploit new markets and so on. The consultation services organized in Regional Packaging Centre, can help associated countries or companies to find the answer. The idea is to ensure packaging industry / if needed/ through Regional Packaging Centre, necessary services on specific subjects.

Yet another way of advisory services is the delivery of training materials, which serve as a tool for upgrading the most important of company resources: manpower.

Consultation and advisory services should directly contribute to the acceleration of packaging industry in the countries associated with IDCAS organization.

6. Basic applied research for the region.

Technological development is seeded and sustained by research. Basic research costs lot of money and time. To avoid overlapping and duplication of research works carried out in the local packaging centres, basic research should be made in Regional Centre. National Packaging Centre should concentrate on testing and quality control services.

Knowledge can be gained in the form of "know-how" but applied research plays an important role in development to avoid waste of raw materials, for acquiring the maximum value and for research to improve productivity and profitability.

The second very important research problem is elaboration of standard test methods /unified testing methods/ for the region.

There is a gap between an original research concept and its successful implementation in industrial production. This gap is one that management cannot easily bridge. There are two aspects of the problem; one of interpretation and objective assessment of potential cost benefits to the company;

the other of implementation, requiring "know-how" to integrate new technology in a specific production system. This is where the associated countries and companies need the objective assessment, skills and help from the Regional Packaging Centre.

7. International Cooperation.

To organize co-operation between:

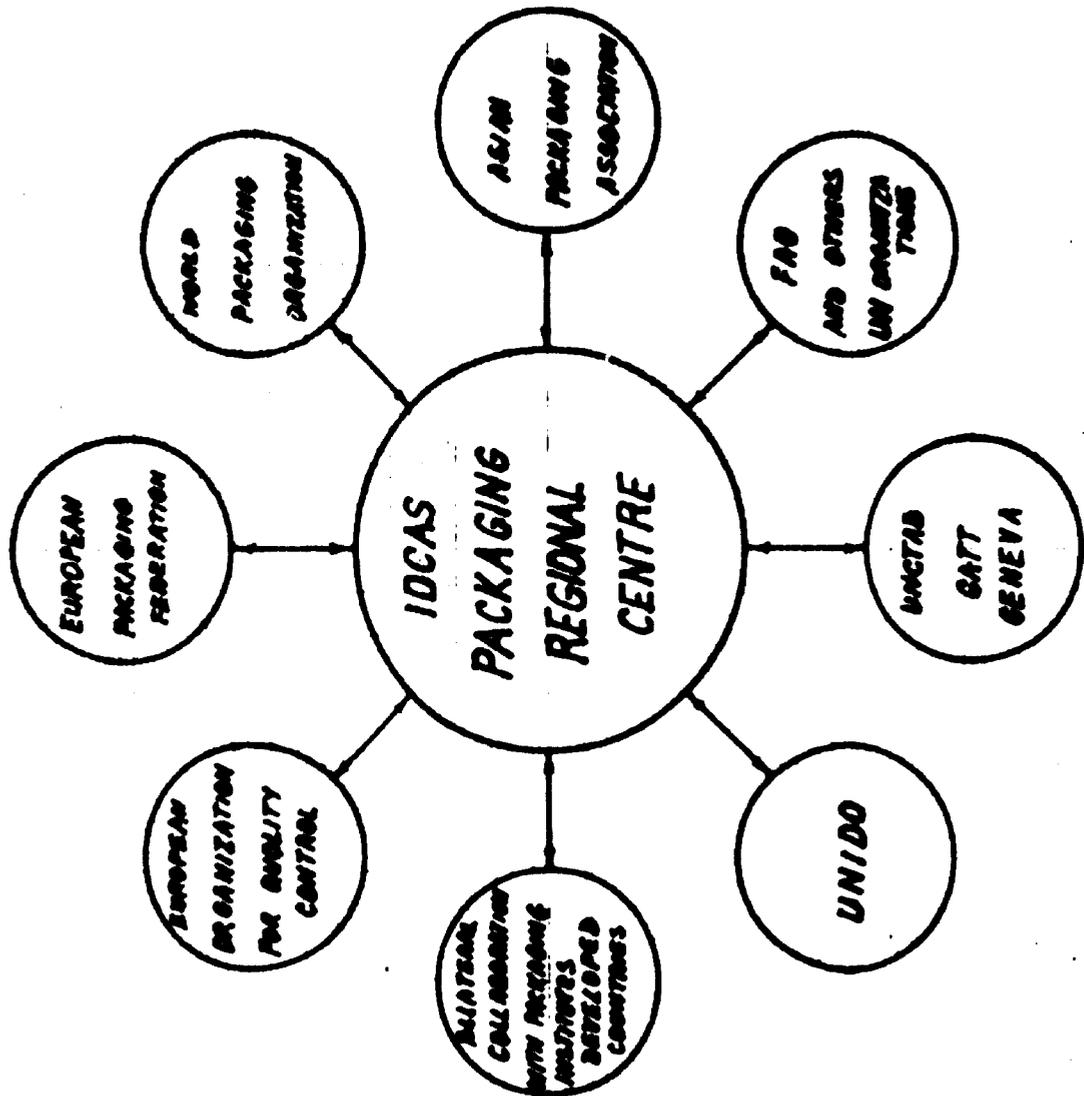
- associated countries
- other regions
- developed countries
- international non-governmental organizations, for example: The World Packaging Organization, European Packaging Federation, European Organization for Quality Control and others.

International cooperation among Arab countries and developed world or other regions is indispensable to avoid heavy losses of products or diversification of financial resources. Within the organization of Regional Arab Packaging Centre should be established an efficient mechanism for co-operation.

The benefits of international co-operation are.

- to accelerate the development of the packaging industry,
- to avoid diversification of financial resources, especially by investment,
- to avoid duplication of work, especially research, testing methods etc.,
- to avoid mistakes made by some countries by learning from their positive and negative experience.

REGIONAL PACKAGING CENTRE COOPERATION WITH OTHER INTERNATIONAL UN AND NON-GOVERNMENTAL ORGANIZATIONS DEALING WITH PACKAGING PROBLEMS



8. Environmental problems.

Industry is run today within a social-economic framework. Regional Packaging Centre should elaborate and advise on the problems connected with the re-cycled packaging waste, on recovery of raw materials, reduce pollution of waters /especially papermakers/, how to conserve raw materials, reduce toxic fumes, poisonous dusts and other environmental problems.

----- . -----
All of these activities if developed individually and separately in each country, will cost lot of money and time and will lead to overlappings and duplication. Taking into account
the lack of skilled people and knowledge, individual solutions in above fields of activity could hamper general development of packaging industry.

To accelerate the programme in this field the Regional Centre for Arab Countries should develop these activities.

The concentration of the basic activity in Regional Centre will contribute to optimalization, utilization of available financial resources for this purpose.

IV

Organization Structure

The purpose of establishing a Regional Packaging Centre for Arab Countries should be to assist the countries involved in building up their own packaging infrastructure, provide them with the services and facilities to programme packaging development on a broad scale and coordinate their activities accordingly.

1. As indicated in chapter III organization of Regional Packaging Centre should be the function of objectives and tasks of the National Packaging Centre.
2. The organization of the Regional Centre should be adequate for the real requirements of the associated countries and region; their level of development, need of export and home market and specific conditions of the countries and region.
3. The relationship between Regional Centre and network of the existing national bodies in the region should constitute an integrated element of the organization.

4. Taking the above into consideration we can envisage
two main models of a Regional Packaging Centre:

- A self-sustained centre existing as a separate institution, having its own administration, facilities and independent budget as well as full organizational structure.
- A centre attached to a well established and functioning national packaging institute where general administration, financial and technical services could be carried out by that body.

5. Coordination problems in the region.

- The existing national bodies in the region will be guided by a co-ordinating committee called "IDCAS Packaging Council of the Region"

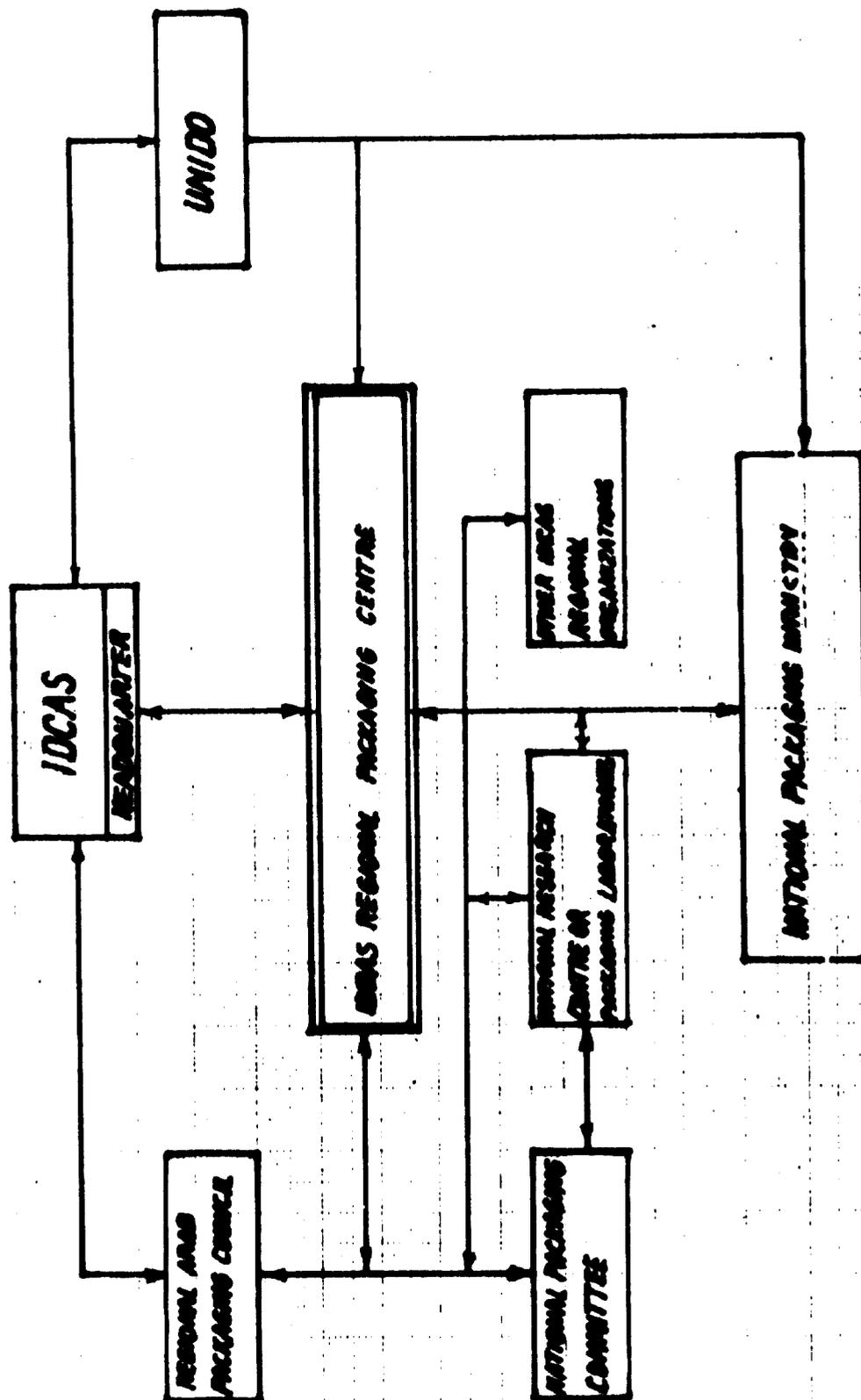
This council should be composed of representatives from the packaging bodies or committees of the participating countries.

The council would discuss and evolve

- strategy
- policy and
- planning

for all questions concerning packaging development in the region.

**ACTIVITIES ON IDCAS PACKAGING REGIONAL CENTRE
IN COOPERATION WITH NATIONAL ORGANIZATIONS**



- Liaison with participating national institutions in member countries will be established through national committees for packaging comprising producers and users to be created for the purpose of the project.

6. Structure of a Regional Arab Packaging Centre.

As a consequence of aims and functions Regional Packaging Centre may consist of the following substantive divisions:

Economic and planning division

The main problems to be elaborated:

- assessment of packaging needs of the region based on national economic programmes,
- programming development of local packaging industries taking into account:
 - available raw materials
 - potential of existing packaging industry
 - home and export market requirements
- lay down the right proportion and priorities of development,
- co-ordination of the countries investment from the point of view of policy of the Arab community,

- formulation of a long-range programme for packaging development in the region,
- marketing problems,
- investment economic analysis.

Research and technology division

- pre-investment feasibility studies including multicountry projects and industrial cooperation,
- technical and economic evaluation of packaging systems from the viewpoint of the region needs,
- basic research laboratory work /applied research/ on selected packaging problems like climatic and mechanical hazards, machineability, shelf-life, compatibility etc.,
- elaboration and unification of testing methods,
- standardization problems including modulus system in packaging for palletisation and containerization problems,
- environmental protection,
- consulting services on packaging design and application,
- - introducing Integrated Quality Control System as a model
- for Arab countries,

- shelf-life and compatibility, for example: migration of additives from packaging materials into foodstuffs and vice versa,
- fitness for specific purposes:
 - material and machines
 - evaluation of packaging for specific purposes /e.g. different distribution systems/,
- implementation of new technologies /e.g. to bridge the gap between an original research concept and successful implementation in industrial production/,
- improving production efficiency, optimum use of equipment and technological processes,
- handling, storage and transportation system in combining with packaging modulus system.

Information, training and promotion division

- organization of unified system of collection, processing and dissemination of specific technical and economic information including:
 - patents
 - packaging systems
 - statistics

- formation of a data bank containing information on:
 - new technologies
 - machines
 - packaging materials
 - new inventions
 - ready made packs
 - market requirements
 - international health regulations,

- elaboration of training programmes on different levels and forms such as study tours, seminars, consultations, exhibitions, competitions - training for management and technologists,

- publication of information bulletin for the region,

- organization of audio-visual materials for in-plant training,

- organization of consultation services for participating countries.

International cooperation division

New International Economic Order which is now in course of introduction by UNIDO in the field of packaging, means a new form of international co-operation including industrial cooperation. Therefore the international co-operation should be the basic and fundamental part of activity for the Regional Packaging Centre.

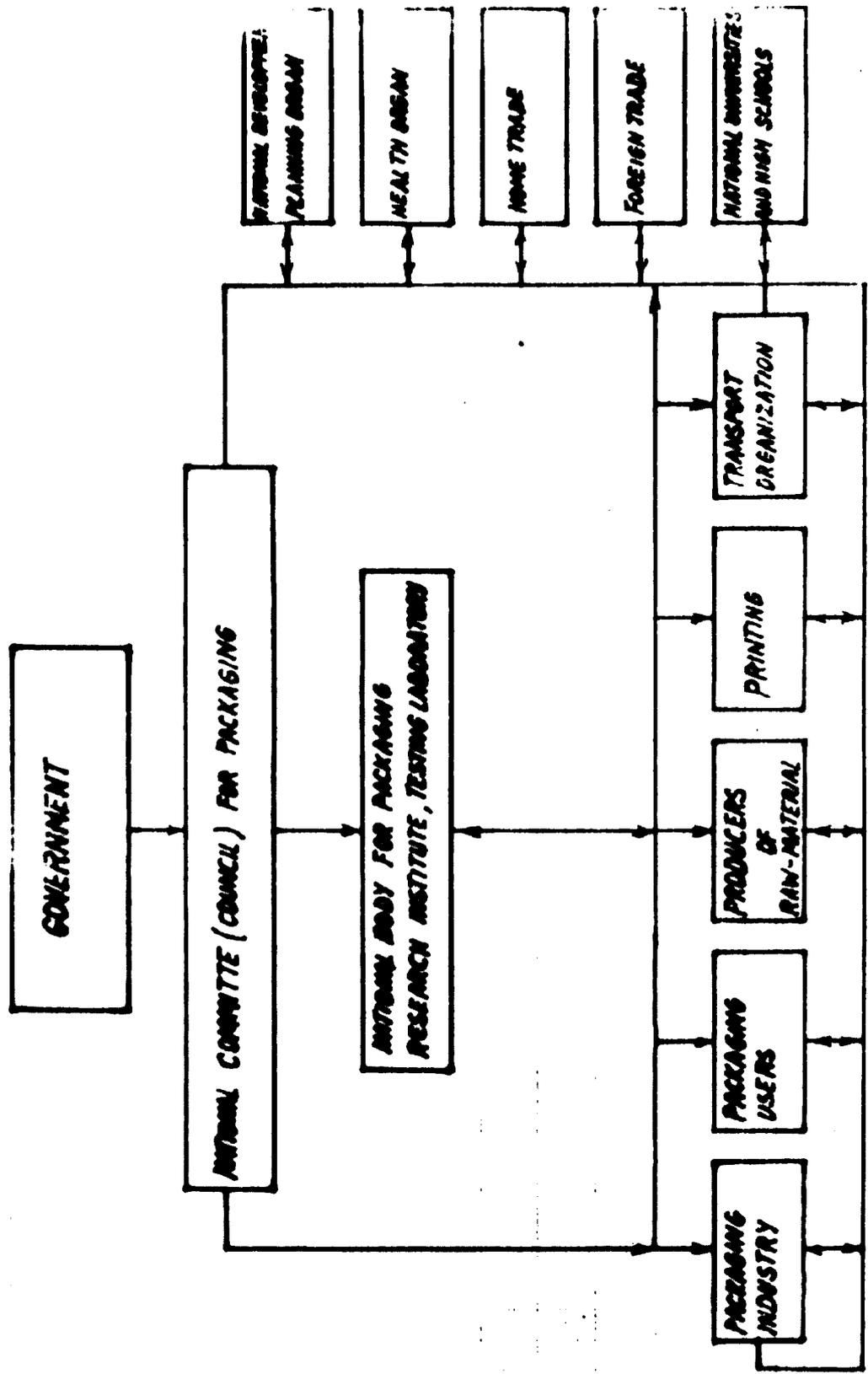
The division of international co-operation should carry out the following activities in this field for the region:

- cooperation between Arab countries
- cooperation among other developing regions, for example with Latin American Packaging Organization, Asian Packaging Federation,
- cooperation with developed countries and organizations, for example European Packaging Federation, World Packaging Organization and other non-governmental organizations,
- cooperation with UNIDO and other UN organizations.

Cooperation should concentrate on the following tasks:

- industrial /technical and financial / cooperation, /mutual investment/,
- consultation on the lay out of packaging factories,
- choice of technology, selection of suitable types and numbers of machinery and equipment and the required adjustment to local conditions,
- choice of most suitable packaging systems from the technical and economical point of view /suitable to the local raw materials/,
- appraisal of locally available raw materials and auxiliary materials and possibility of using them for the Arab Region,

**ORGANIZATION OF PACKAGING ACTIVITIES IN THE COUNTRY
AND COOPERATION (COORDINATION) ON NATIONAL LEVEL**



- provision of "know-how" in production, application technologies, quality standard,
- provision of training, facilities and fellowships in the developed countries, in countries of the Arab region and where applicable in other developing countries,
- installation of equipment and training key personnel,
- co-operation in matters of organization and marketing,
- exchange of information.

V

Steps of development

1. The proportional increase of production materials and ready-made packages should correspond in each Arab country with the projected development of production of other commodities. Therefore packaging development should not be considered in isolation, should be analysed in connection with the product, its properties, price and destination. Through such a complexity, packaging maintains an appropriate place and importance in national economy

of each Arab country.

Development of a national packaging industry should be
based on an integrated programme.

2. To ensure proper development of a national packaging industry it is indispensable to establish a national packaging body and National Packaging Committee according to the resolutions undertaken on the II Conference of Arab Countries in Alexandria /IDCAS, UNIDO Conference, Alexandria 27-31 October 1975/.

National Packaging Body /laboratory, centre or institute/

should render the following services to the national packaging industry:

1. testing and developing packages and packaging materials for home and export market,
2. adjustment of local materials to the adequate packaging machines and systems,
3. training of packaging producers and users
incl. management,
4. elaboration of development programme for packaging industry. Strategy for industry development of the country,

5. organization of necessary information system
for industry,
6. enlistment of international cooperation
and all those concerned with packaging subjects.

3. The National Packaging Committee

Should consist of representatives of government, industry users and trade /home and international/.

The Committee should carry out the following activities:

1. Establishing national programmes in the field of packaging and advise the government on various aspects of packaging.
2. Coordination of packaging activities taking into account the interests of producers, users, ----- national health authorities, export needs and home market.
3. Initiation of promotional activities in the field of packaging including international co-operation.

4. Regional Arab Packaging Centre

Is the basis for the activities of the National Centres. Regional Centre should approach the packaging problems in such a way that each National Centre can use its results as a basis for own work. This means that Regional Centre should perform applied packaging research.

To emphasize the steps of development of Regional Arab Centre it is necessary to start with the needs of the countries participating in the region.

We can distinguish three main groups of Arab countries within IDCAS framework according to their stage of industrial development:

a/ Least developed countries

among the Arab countries put emphasis on product lines with involved small-scale production and intermediate technology. Such countries at this stage of development require higher technology of production. They give more emphasis to simple hand operated machines, taking into account the local manpower possibilities.

There is a need for more inflow of information
and assistance from more developed countries
/in the region/ in the development of the
industries in the least developed countries.

The main problems in these countries are the
technical manpower training and primary level
institutional programme.

b/ Intermediate developed countries

Most of the packaging industries in these
countries are the result of expansion of small
workshops. The countries look for foreign
collaboration in the manufacture of medium
packaging industries. The countries put emphasis
on the improvement of existing industries
and diversified production programme. Therefore,
the facilities of the existing institutions in
this field are being reinforced. In these
countries the basic problem is technical man-
power, management and "know-how". The first step
is a need to train local personnel operation
and management of medium sized industries.

There is also a need to orientate the existing institutions towards the various models of technology transfer through international cooperation.

c/ The more developed countries

Emphasis is given in general to local manufacture of full range industrial products basing mainly on local raw materials. All these countries require higher technology. Therefore, more attention is paid to the local management aspects of industries, quality control, marketing and training and higher education in industrial and technological engineering fields. Regional and international cooperation, "know-how", market survey, exchange of information are important for further development.

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Each of the above categories of the developing countries would require in the first step different patterns of packaging activities.

- In the early stage of industrialization of the country packaging needs could be satisfied by simple application of basic locally available packaging materials, like timber, jute, wrapping and packing machines according to the practical experience of local users and in the case of exported commodities to the foreign market requirements.

- Further development of national economy brings diversification of manufactured goods, growing demands of consumers for more processed and packed food as well as efforts towards exporting more work containing commodities.

- Many countries would like to solve the problem by means of buying licences from the foreign companies. However, these industries suffer from lack of modern machines and adequate "know-how" as well as trained technical staff.

Even if there are sophisticated, high speed automates installed, their capacity is used only fractionally because of insufficient knowledge of the operating personnel and inadequate selection of packaging materials to be run on a given machine.

Absence of packaging consultants to solve the problems causes losses in productivity, high cost and quality below international standard which have adverse results in export.

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The Regional Arab Packaging Centre should provide with services and facilities according to the diversified country needs.

In the first stage of development the Regional Centre

should organize the following services:

- information system
- training
- international cooperation

/appropriate to each country/

In the second stage of development the Regional Centre should

organize:

- applied research
- consultancy services
- industrial cooperation
- transfer of "know-how"

/appropriate to each country/

VI

Some elements of functions and activities
of the Regional Packaging Centre and its
collaboration with the National Packaging
Industries /National Packaging Centres/.

Technological development is seeded and sustained by research. The kind of research that effectively feeds technology calls on resources which always are limited by the industrial branch. Therefore a centre of expertise is needed, which not only combines resources greater in total than the sum of several companies, but also elaborates cross-technological problems /branch or interbranch/ and accumulates technological "know-how" from abroad. Such a centre of expertise must be able to solve common problems to further country's and industry's progress.

The work of the Regional Packaging Centre should be based on an integrated national programme taking into account all technical, technological, economical, organizational and health problems incl. environmental.

By formulating the integrated programme it is necessary to establish the right proportion and priorities to avoid mistakes and heavy losses in implementation.

1 example: The economical problem of new investment.

Development needs of course capital investment. In some countries there are different opinions about investment needs at various stages of development. In some countries there is a tendency to build a low production capacity in order to meet the small local demands. But low capacity means high costs. Large-scale capacities in selected segments of packaging industry can open the door for the international co-operation and promotion of export packed goods.

By the new investment the energy expenditures on different types of packaging should be taken into account before decision is made.

For example the relative costs /in term of energy/ for different packaging branches are cu.:

glass	5,5%	Total costs	
metal cans	4,8%	"	"
cartons	3,8%	"	"
pouches			
/frozen/	3,5%	"	"

2 example. Economical aspects of new transport packages.

Certain countries refuse to accept goods packed in wooden crates. The economic calculation showed that if all expenses are calculated, costs of transport and handling included, then

replacement of wooden packages by cardboard containers or unit loads packed in shrink film is economical, even if other advantages are disregarded. Such a problem of promoting new packages should belong to the Regional Packaging Centre.

3 example. Organization of processing of new raw materials.

In one country chemical industry increased production of PVC hard plastic sheet, but inadequate preparation by the receivers of this material for processing it into packages, resulted in temporary difficulties in using it. The programme should include simultaneously a plan of action for introduction of plastics, especially in the food industry, on the other hand the organization of processing of new raw materials and packaging materials requires as a matter of fact previous preparation of both, industrial enterprises and goods turnover units, especially those in trade and transport. All these elements should be included in the integrated programme.

4 example. Containerization

A closely connected technology which offers tremendous possibilities for Arab countries is containerization.

Containerization is undergoing rapid development. However, it requires especially careful preparation in connection with

packaging modulus system, transport packaging, terminals and transportation facilities. The establishment of such facilities requires the direct support and assistance of Regional Packaging Centre, especially for the sea-countries. The interested countries must decide themselves just where and how such facilities are to be introduced. This is the technology for today and of the future, taking into account container bridges, and Arab countries should be the equal partners in the international chain of containerization and packaging. Unless the Arab countries /especially sea-countries/ begin now to make special arrangements for container ports and container terminals, they will run the danger of being unable to load or unload goods in accordance with international standards and conditions. The preparation of the plan of action incl. information services should belong to Regional Packaging Centre.

5 example. Quality Control System

At the Second Regional Meeting of Arab National Packaging Committees held in Alexandria has been recommended that Quality Control as a system should be introduced in selected packaging factories at the beginning and could serve as a model for further development as an effective mean and tool for the consolidation of efforts which aim at raising the standard

of production. According to my information no action has been undertaken in this respect. The problem cannot be solved without assistance from professional body.

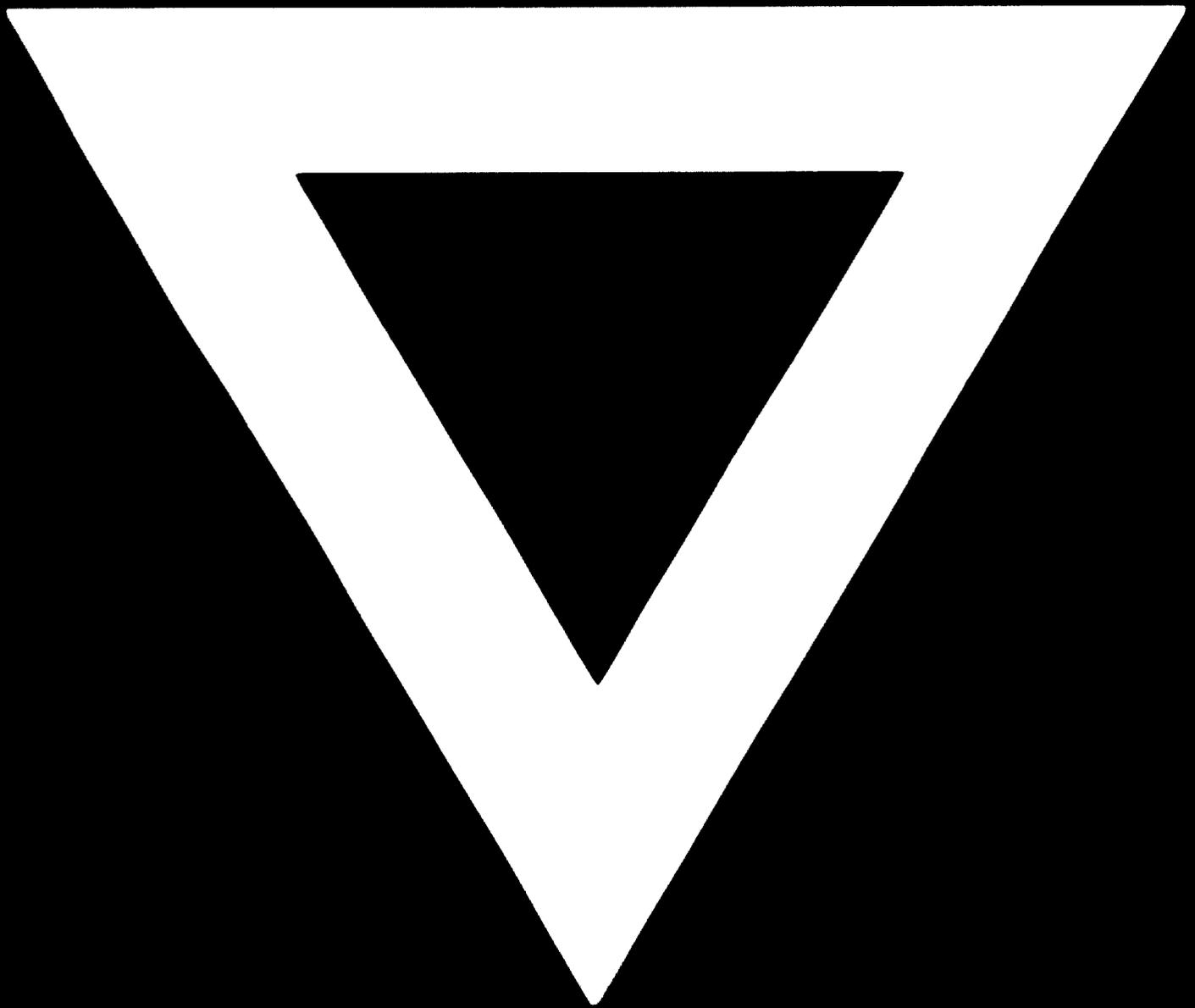
Regional Packaging Centre should indicate how to set up a quality control as a system. It should look at it from the practical view point in terms of cost benefits from saving waste and minimising customers' complaints. The preparation work should consist of precising the criteria of quality control measurement, necessary equipment, manpower and so on; studying such problems as the gain or loss of moisture in the packaging of food, elaborating sensitive methods of measuring the water vapour transmission rate of a transport packaging which enables to determine the barrier properties of packaging materials.

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In all these problems a full technico-economic study, including /if necessary/ market surveys is considered to be a vital part of the work of Regional Arab Packaging Centre. The countries or industries might have to choose for example between modification of existing factories /machinery/ and setting up a new plant. The consultation of Regional Centres can evaluate the country /industry/ needs, supply a background for decision-making, calculate cost benefits etc. The scale of consultancy in this area varies according to the country's needs and possibilities.



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