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ESTABLISHMENT OF AN INDUSTRIAL INFORMATION  
BANK FOR THE GCC

TF/RAB/90/001

Terminal report\*

Prepared for the GCC Secretariat General  
Directorate of Industry and Electricity  
by the United Nations Industrial Development Organization

Based on the work of Adel M. Habib, computer expert  
to establish an industrial data bank

Backstopping officer: Claude Carrier,  
Department for Industrial Promotion,  
Consultation and Technology

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\* This document has not been edited.

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## EXECUTIVE SUMMARY.

The industrial section of the economic affairs department at the GCC is responsible for providing consolidated industrial information to high level committees responsible for making decisions affecting industrial planning and policies. Therefore, a data bank containing industrial data of all establishments from all GCC member countries is needed.

The industrial sectors which were identified based on discussions with members of the staff include: petrochemicals, technology, aluminum, steel, electricity and water, and cement. Within these and other industries data of production, raw material, power and water consumption, imports and exports, and manpower need to be collected. Other data bases which was identified and which cuts across some of the above mentioned industries are the protection, licensing and expansion.

The data currently residing in the computer is out-of-date and therefore, needs to be updated with current data. The studies which I reviewed offered little assistance since they were designed primarily for research purposes.

At the recommendation of Mr. Al-Rashid, the protection system was given top priority. This system was completely analyzed, designed, coded, tested and is now operational. Another system which was started is the licensing system. The data entry screens and programs have been written and tested. The programs for two types of reports have also been written and tested.

Much work still needs to be done if the industrial data bank is to be established. The different tasks comprising this work are identified in my recommendations. The nucleus which was started can serve as a starting point towards the final goal.

**ACKNOWLEDGMENT:**

I would like to offer my sincere thanks to the following individuals for their assistance;

Mr. Muhammad Al-Rashid for providing me with guidance and understanding of the Secretariat's requirements for information, and participating in the discussions during Protection System development.

Mr. Yousef Al-Mehbash for his assistance in developing the Products' Protection Information System.

Mr. Ali Al-Jasem for providing information regarding petrochemicals industry and for assistance in completing test data for the Protection system.

Mr. Sulaiman Al-Sayari for providing information regarding technology, aluminum and steel industry and for assistance in completing test data for the Protection system.

Mr. Sulaiman Al-Gassab for providing information regarding Value Added and cement industry and for assistance in completing test data for the Protection system.

Mr. Saud Al-Mousa for providing information regarding industrial files and for assistance in completing test data for the Protection system.

Mr. Nabeel Al-Aqueel for providing information regarding electricity and water purification industry.

Mr. Mansour Al-Janouby for assistance in coding the test data for the Protection system and for providing logistical support.

Mr. Sulaiman Al-Khodairi for assigning priority to the work associated with the development of the new systems.

Mr. Fahad Al-Twaijry for his assistance in transferring the Harmonized System of Commodity Description data from PC to Main-Frame and his providing data entry operator to test the Protection system.

Mr. Alex Tolentino for creating the data entry screens and writing the computer programs for the Protection system and initial programs for Licensing.

Mr. Saad Al-Sharif for creating the support data bases and arabizing the Protection system's screens and reports.

## CURRENT STATUS AND ANALYSIS.

### Research Papers and Studies.

During the first three weeks I was presented with several studies. Among these documents were "Study of Manpower and Training in the Electricity and the Water Purification Sectors in all GCC countries" , "Study of the Arabian Gulf States Electrical Power System Interconnection", and " the Resource Base for Industrialization in the Member States of the GCC".

Upon reviewing the studies' structure and contents, it became clear that most of them, with the exception of the "Study of the Arabian Gulf States Electrical Power System Interconnection", were designed and conducted primarily for research purposes, and are academically oriented. While they contained valuable information, they can not be used for developing an industrial data bank. Most of the data they contain are of historical nature or too old to represent the current environment.

### Protection System.

According to the Law No. 7 enacted in the year 1989, industrial products of national origin can be protected from foreign competition provided they fulfill certain requirements. To obtain this protection, any manufacturer may apply for protection for one or more of its products. A protection committee, composed of members from all six GCC countries, meets two times a year to review the request and its accompanying documentation and issues its decision.

To facilitate the work of protection committee, a computerized system needed to be developed to provide the committee with the required data in an organized manner. The system will reside in the computer of the GCC Secretariat General. To establish this protection system, the following procedure was followed:

1. Studied the document titled 'Unified System for The Protection of Products of National Origin in The GCC Countries' to identify the information needed by the protection committee to reach its decisions.

2. Working closely with Mr. Yousef Al-Mehbash as the person responsible for the system and Mr. Muhammad Al-Rashid as the department director, developed five (5) questionnaires to collect the data. The questionnaires were produced in both arabic and

english. In addition, instructions to the ministries of industry, other government agencies, and industrial establishments were written. These instructions were to identify who is responsible to complete which parts of the forms and the meaning of most elements.

3. Designed two data base structures and four reports. The reports are designed to present the protection committee with the required information in an easy and clear format. In addition, several of the information will be presented graphically. Again, Mr. Al-Mehbash was constantly consulted to ensure that the system meets his requirements.

4. Discussed the system requirements with the programmer who is responsible for designing the data entry screens and writing the computer programs. To accomplish these tasks several supporting data bases were needed. One of these data bases, the arabic version of Harmonized System of Commodity Description (HCC), was obtained from the Department of Customs (SADC) of the Saudi Arabian Ministry of Finance and National Economy.

5. To test the data collection's forms design and the associated instructions, requested from members of the staff to complete 20 packages of the forms. Each package represented a corporation. Requested feedbacks from them regarding the clarity of instructions and the ease of following them.

6. Requested Mr. Al-Janouby to code the products using the HCC manual obtained from SADC.

7. Arranged with Mr. Al-Twajiri of the data processing department to utilize one of his operators to enter the data from the test forms.

8. Mr. Abdul-Ilah, data entry operator, entered the test data.

9. All the data entry and report programs were tested individually and are now operational.

10. Requested from Mr. Al-Sharif to arabize the program messages, data entry screens, and output reports.

11. Final compilation of the programs were done and sample reports were produced and verified.

The system can now be used to enter data and produce reports. Correction programs still need to be written. Mr. Tolentino has been advised and will write the required programs after completing the initial phase of the Licensing system.

Please see APPENDIX A for the data collection forms, APPENDIX B for the data bases structure, and APPENDIX C for sample reports.

### Licensing System.

To coordinate the licensing of large industrial projects among the six GCC countries, a data base containing basic information of all the licensed establishments with working capital of at least twenty million (20,000,000) Saudi riyals or its equivalent in other GCC currencies needs to be developed.

Using the form approved by the GCC committee, an entry program was developed and two types of reports generated. One of the reports will provide a listing of all the licensed factories whose license is more than a year old and the factory has not started production. The purpose of this report is for follow-up and to ensure that the most current information is available for the decision makers. The other report will provide the requester with information about all the factories in a certain industrial activity which were licensed in any period of time.

This system is in its early development stage.

### Expansion System.

This system is similar to the licensing system except that the licenses issued are for existing establishments. Further analysis still needs to be done.

### Petrochemical System.

In the first conference dealing with coordinating petrochemical industries throughout the Arab world, a suggestion was made to establish a petrochemical data base. This conference was held in Bahrain from 20 to 22 January 1986. Until now, no concrete steps were taken to implement this suggestion. Two lists of products were submitted as initial candidates for this data base.

I believe that creating this data base is of utmost importance since the petrochemical industry represents a large portion of industrial output in most Arab countries. Of course the initial data may be primarily from the GCC countries, however, data from other Arab countries.

### Technology System.

There is a need to establish a data bank which will assist in the exchange of research information among the research institutes,



centers, and universities in the GCC member countries. Information in this data bank will pertain to work done in the GCC. Through discussions with Mr. Al-Sayari, the following data bases should form the nucleus of the needed data bank:

1. Research Centers in the GCC: This data base will contain detail information on each center's capabilities. These capabilities will include laboratory equipment, research personnel, types of research conducted, and fields of specialization.

2. Studies and Researches: This data base will contain detail information on all the studies and research papers published by all the research centers in the GCC countries.

3. Worldwide Research organizations: This data base will contain a listing of all research organizations involved in similar types of research as conducted in the GCC.

#### Aluminum and Steel System.

A comprehensive data bank needs to be created containing all pertinent information on the steel and aluminum industries. This data bank will contain such information as: types of products, amount of production, production requirements, amounts exported,

#### Electricity and Water System.

An initial decision to establish a consolidated data bank regarding electricity and water was taken at a meeting in the Secretariat General of the GCC in September 1986. A memorandum to all GCC ministries of Electricity and Water requesting their views as to the contents of such data bank was subsequently sent. Upon reviewing the responses received from some of the ministries it became apparent that the views represents a very wide scope. To establish an automated system which can serve all the ministries requirements several data bases need to be created. But before such data bases can be established one must know how will the ultimate system be used, and how will it serve the individual countries as well as the GCC as a whole.

In any case, several data bases could be created to provide basic information about all physical plants and equipment in all GCC countries. Those dealing with electricity may be separated from those dealing with water. In Saudi Arabia, electricity and water come under two different ministries. Such data bases could be:

Equipment data base: This data base will provide detail information of all the equipment in each plant. The information

should include type, age, capacity, efficiency, frequency of repair.....etc.

Inventory data base: This data base should include information such as the amount and types of spare parts on-hand, are they inter-changeable with other parts.....etc.

Manpower data base: This data base will include detail information about the skills and nationalities of the staff in each establishment.

Production data base: This data base will contain power production and consumption data organized commercial versus industrial and by type of industry.

The request for a data bank regarding water seems to refer to water desalinization plants. This industry is vital for all GCC countries. A study needs to be conducted to identify the information required from the development of such system.

#### Other Industries.

There is need to establish data bases for all other industries such as food processing, cement manufacturing, metal and wood industries, dairy products.....etc. Each of these data bases should include all pertinent information such as the amount of production, raw material used, manpower requirements.

#### INDUSTRIAL ESTABLISHMENTS DIRECTORY.

The last directory was published in 1987. With the dynamic industrialization occurring in the GCC. A new directory needs to be compiled and published. A new survey needs to be taken as most of the existing information is no longer valid, and new establishments must be added.

## CONCLUSION AND RECOMMENDATIONS.

As can be seen from the previous discussions, there is a great need to establish an industrial data bank which will provide the member countries with accurate and current information. This information is critical in order to coordinate the industrial activities among them. The data currently residing in the Secretariat General's computer is out of date. It is therefore necessary to obtain current data about the industrial activities and products in all six member countries.

I, therefor, recommend that the person charged with the task of establishing an industrial information system should:

1. Perform detailed studies for all the industrial sectors.
2. Identify the sources of data from governmental and commercial organizations within the GCC and from international data banks.
3. Visit the GCC ministries of industry to assess the availability of accurate and current data, and means of obtaining such data.
4. Design input instruments and output reports.
5. Design the data bases structures and specify all their data elements.
6. Work closely with the data processing department to implement the data base design.
7. Establish a mechanism to ensure that the data stored in the industrial data bank are kept current.

I further recommend that, initially, one programmer be assigned full-time to the economic affairs department to write the programs needed to implement the industrial data bank. As the system grows two programmers will be needed to perform these tasks. With regards to data entry, two or possibly three dedicated data entry operators will be needed if a comprehensive industrial survey is conducted.

APPENDIX A

خطوات تعبئة بيانات "نموذج استثمارات طلب حماية المنتجات الصناعية ذات المنشأ الوطني بدول مجلس التعاون"

- ١ - يتم تعبئة هذه الاستمارة من قبل المنشأ عن كل منتج صناعي مراد حمايته فقط .
- ٢ - تزود وزارة الصناعة المنشأ التي تطلب حماية منتجها (منتجاتها) بنسخة من "نموذج استثمارات طلب حماية المنتجات الصناعية ذات المنشأ الوطني بدول مجلس التعاون" .
- ٢ - تعبأ المنشأ الطالب لحماية منتجها (منتجاتها) جميع البيانات الخامة بها من جميع استثمارات النموذج ثم تعيدها لوزارة الصناعة .
- ٤ - يمكن للمنشأ استخدام نسخ اضافية من استثمارات النموذج في حالة عدم كفاية خانة اية من الاستثمارات .
- ٥ - تتأكد وزارة الصناعة ان جميع البيانات معبأ في الاستثمارات الخامة بالمنشأ من النموذج ، مع تدقيق البيانات.
- ٦ - تعمم وزارة الصناعة بكل دوله " نموذج استمارة طلب حماية المنتجات الصناعية ذات المنشأ الوطني بدول مجلس التعاون" على جميع المنشآت الصناعية التي سيتأثر منتجها (منتجاتها) الصناعي بالحماية الجماعية المقترحة سواء كانت ذو منشأ وطني او محلي لتعبئة بيانات النموذج ثم تعيدها لوزارة الصناعة بعد استكمال تعبئة البيانات عدا استمارتي رقم "٣ و ٥" .
- ٧ - تتأكد وزارة الصناعة ان جميع البيانات معبأ من استثمارات النموذج مع تدقيق البيانات .
- ٨ - بعد اكمال استلام وزارة الصناعة لجميع " النماذج " التي تم تعبئتها على المنشآت بما فيها المنشأ الطالب للحماية ترسل الى الامانة العامة لمجلس التعاون.
- ٩ - عند الحاجة لاية استفسارات حول هذا النموذج يمكن الإتصال بـ تليفون مباشر ٤٨٢٩٣٧٨ - ٤٨٢٩٣٧٧/١٥١٢  
فاكس ٤٨٢٩٣٧٧٦/٤٨٢٩٣٧٨

بيانات عامة تعريفية عن المنشأة

- ١ - اسم المنشأة : \_\_\_\_\_
- ٢ - العنوان الكامل : \_\_\_\_\_
- الدولة : \_\_\_\_\_
- المدينة : \_\_\_\_\_
- باني العنوان : \_\_\_\_\_
- تلفون : \_\_\_\_\_
- فاكس : \_\_\_\_\_
- ٣ - نوع النشاط الصناعي : \_\_\_\_\_
- ٤ - رقم الترخيص/التسجيل الصناعي : \_\_\_\_\_
- تاريخه : \_\_\_\_\_
- ٥ - رقم السجل التجاري : \_\_\_\_\_
- تاريخه : \_\_\_\_\_
- ٦ - رأس المال الاسمي المرخص به : \_\_\_\_\_
- نسبته : \_\_\_\_\_
- اجنبي : \_\_\_\_\_
- رأس المال المدفوع : \_\_\_\_\_
- نسبته : \_\_\_\_\_
- خليجي : \_\_\_\_\_
- اجنبي : \_\_\_\_\_

## تعريفات عن البيانات في استمارات الحساب

استمارة رقم "١" :

وحدة الإنتاج : تمثل هذه الوحدة مفلس مفعل لقيمة الانتاج . ويمكن من مقارنه الكميات المنتجة مطيا مع المستوردة . وتقاس وحدة الانتاج/ بالمتر - متر مربع - طن - جالون . وحده .. الخ .

كمية الإنتاج الفعلية : تعبأ الانتاج الفعلي لآخر سنتين أخيرين مع تحديد تاريخ العام المقصود به .

كمية الإنتاج : عدد الوحدات المنتجة .

متوسط عدد ساعات العمل : تشمل الوقت المطوب للفترة الزمنية "وردية العمل" لتسهيل الآلات وتوزيعها عن العمل .

الطاقة التعميمية للآلات في السنة : كمية الانتاج الممكن الحصول عليها اذا اغلقت الآلات بكامل طاقتها "خ" ساعات يوميا و "ب" ايام عمل في الأسبوع .

المواصفات القياسية المطبقة : تمثل المواصفات المطبقة وهي المواصفات القياسية التطبيقية المعتمدة او المطية او الدولية .

متوسط سعر بيع التجزئة : يمثل متوسط سعر البيع في السوق المحلي بالدولة العفو خلال العام الاخير .

استمارة رقم "٣" :

مبلس : رقم المسلسل يجب ان يتطابق مع رقم المسلسل للمنتج الوطني المطوب هابته والملكورد في استمارة رقم "١" . وفي حالة تعدد المنتجات المستورده المنافسة لمنتج وطني واحد "مثل تعدد الماركات التجارية او تعدد البلدان الاجنبية الممنعه له" فيتم اعطاء جميع هذه المنتجات نفس الرقم المسلسل .

مواصفات المنتج المستورد : مثل المواصفات المذكورة في استمارة رقم "أ" .

الوحدة : يجب أن تكون نفس الوحدة المذكورة في استمارة رقم "أ" .

استمارة رقم "هـ" :

الممانع تحت الإنشاء : الممانع المرخصة والتي لم تبدأ في الإنتاج بعد .

الممانع تحت التنوعه : الممانع المرخصة لزيادة انتاجها عن كمية الانتاج المرخص لها سنويا من آخر ترخيص حصلت عليه .

اجمالي الكميات الإضافية : هو الفرق بين "الكمية المرخص بعد التنوعه ناقصا الكمية المرخص قبل التنوعه" .

١١٥٠٢٣ ص





مستلزمات الانتاج

اسم الدولة :  
اسم المشاة :

الكمية المستخدمة ومدروها		الوحده	نوع المادة الخام او نمط المصنعه المستخدمة في الانتاج	مسلل
من خارج دول المجلس	من دول المجلس			

١٠١٧٠٢٣ ص

بيان عن المنتجات المستوردة المنافسة للمنتجات ذات المنشأ الوطني المطوب صايتها

اسم الدولة :

مواطات المنتج المستورد	تعباً من قبل الجهات الرسمية "الجمارك"					تعباً من قبل المنشأ			
	قيمتها	الكمية المعدرة في اخر سنة	قيمتها	الكمية المستوردة في اخر سنة	الكمية المستوردة في اخر سنة	في السوق المحلي الوحدة المستوردة متوسط سعر بيع	الوحدة	نوع المنتج المستورد المنافس	مسلسل

١٠١٠٢٣ ص

بيان عن القوى العاملة بالمنشأة

اسم الدولة :  
اسم المنشأة :

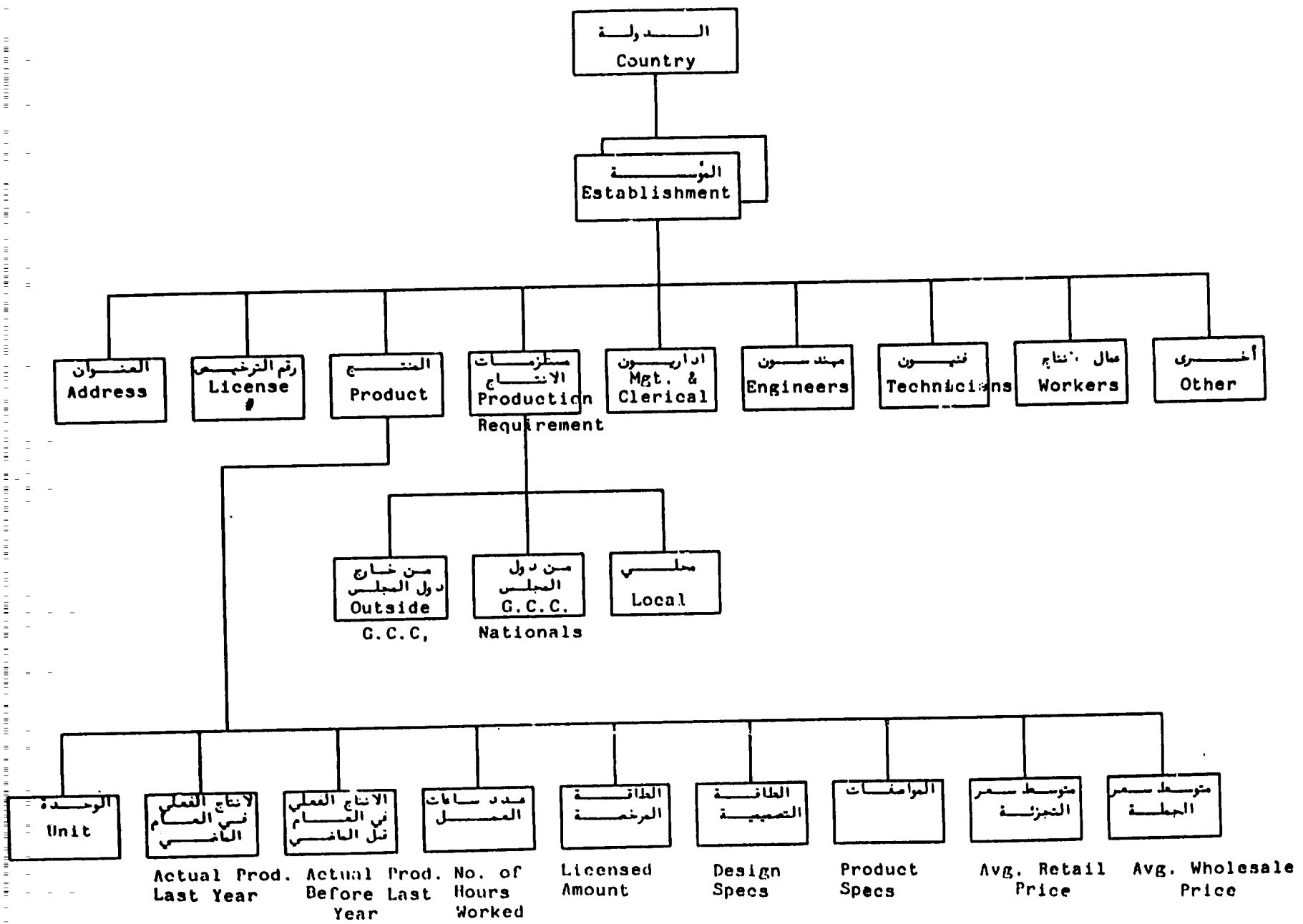
فئات المشتغلين	من دول المجلس	عرب	آسيويون	غربيون
اداريون				
مهندسون				
فنييون				
عمال انتاج				
اخرى				

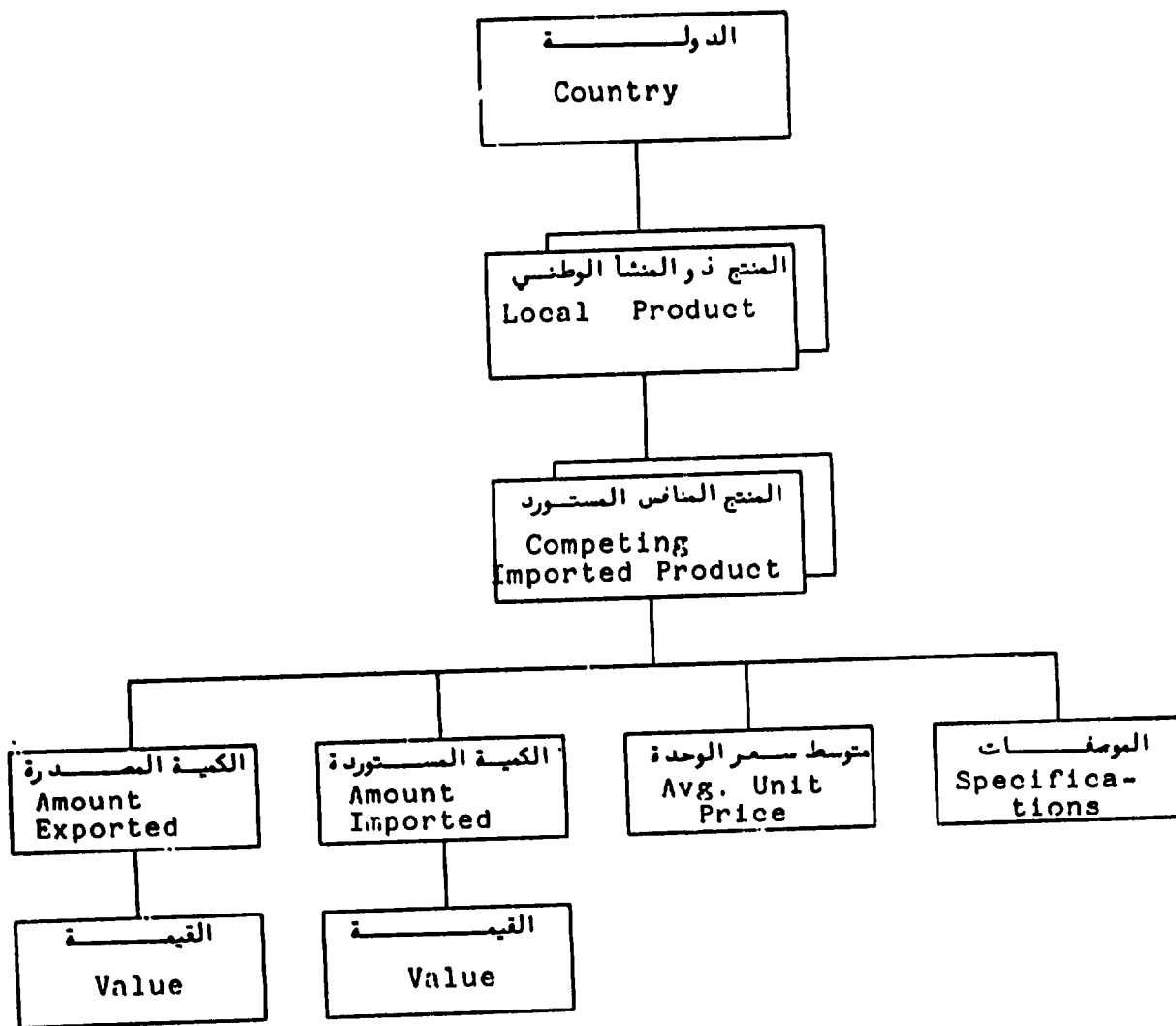
١٠١٠٢٣ ص

الانتاج الفعلي والمتوقع

الدولة :

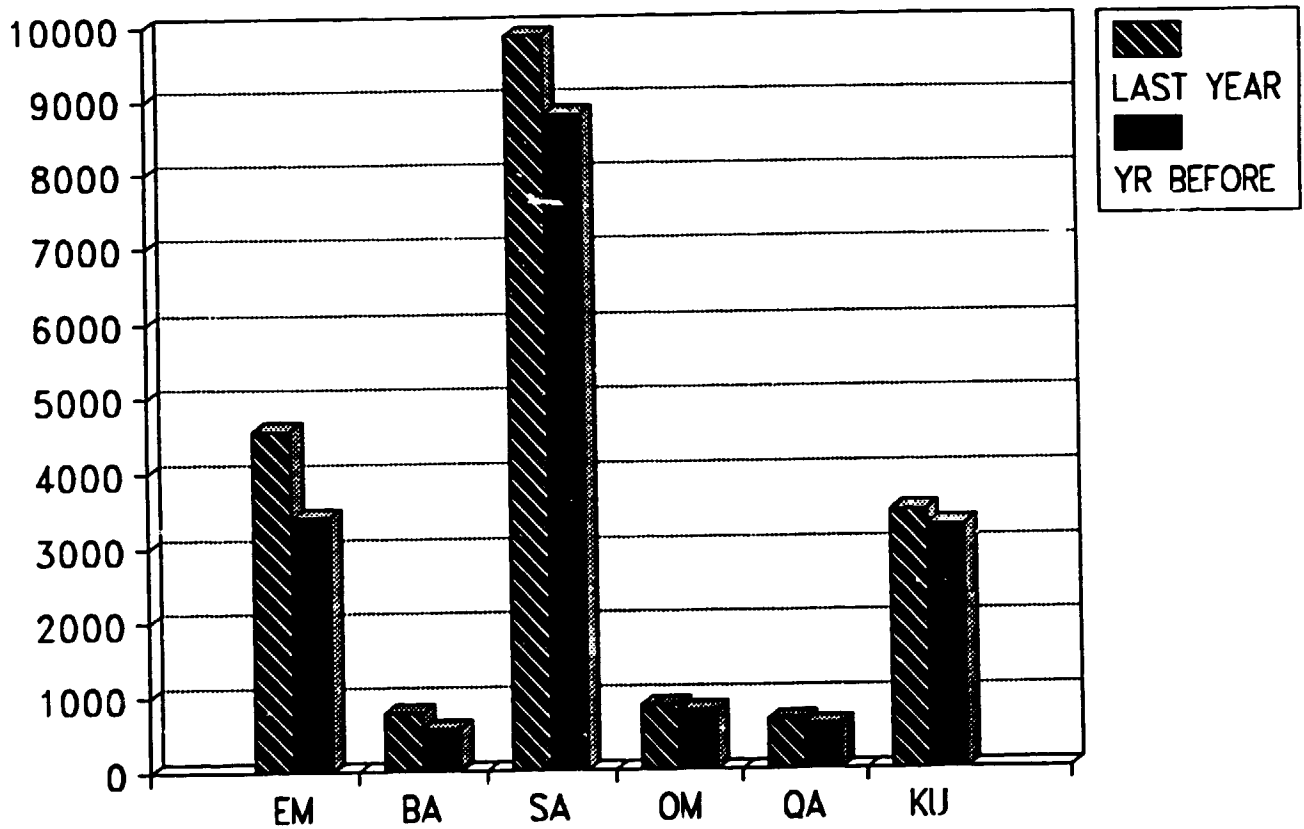
بيانات تعبأ من قبل وزارة المصناعات		بيانات تعبأ من قبل المنشأة		نوع المنتج	مسلسل
المصانع تحت التوجه	المصانع تحت الإنشاء	المصانع تحت الإنشاء	المصانع المنتجة		
الكميات الأممية	الكميات المرضفة	الكميات المرضفة	الكميات الأممية	الكميات الأممية	الكميات الأممية



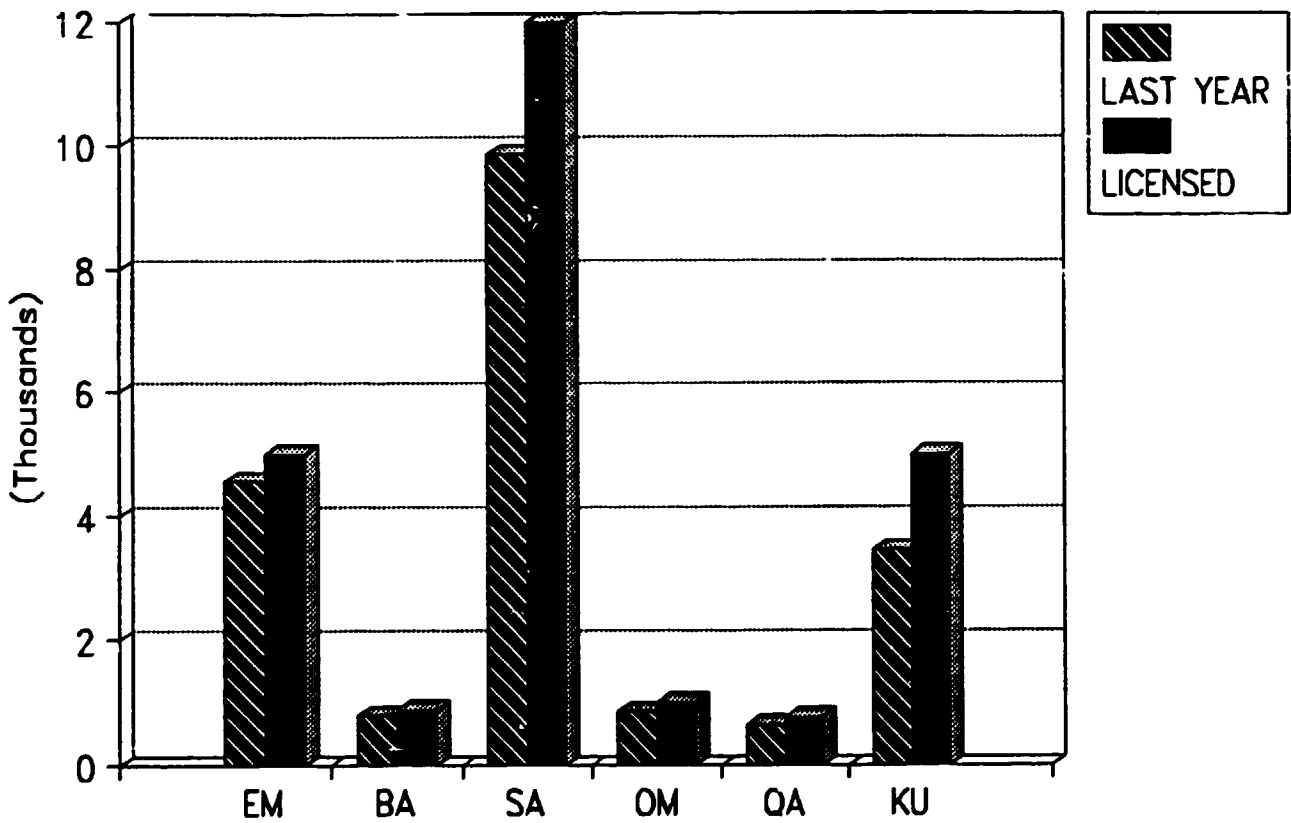


APPENDIX C

# COMPARING ACTUAL PRODUCTION BETWEEN LAST YEAR AND THE YEAR BEFORE

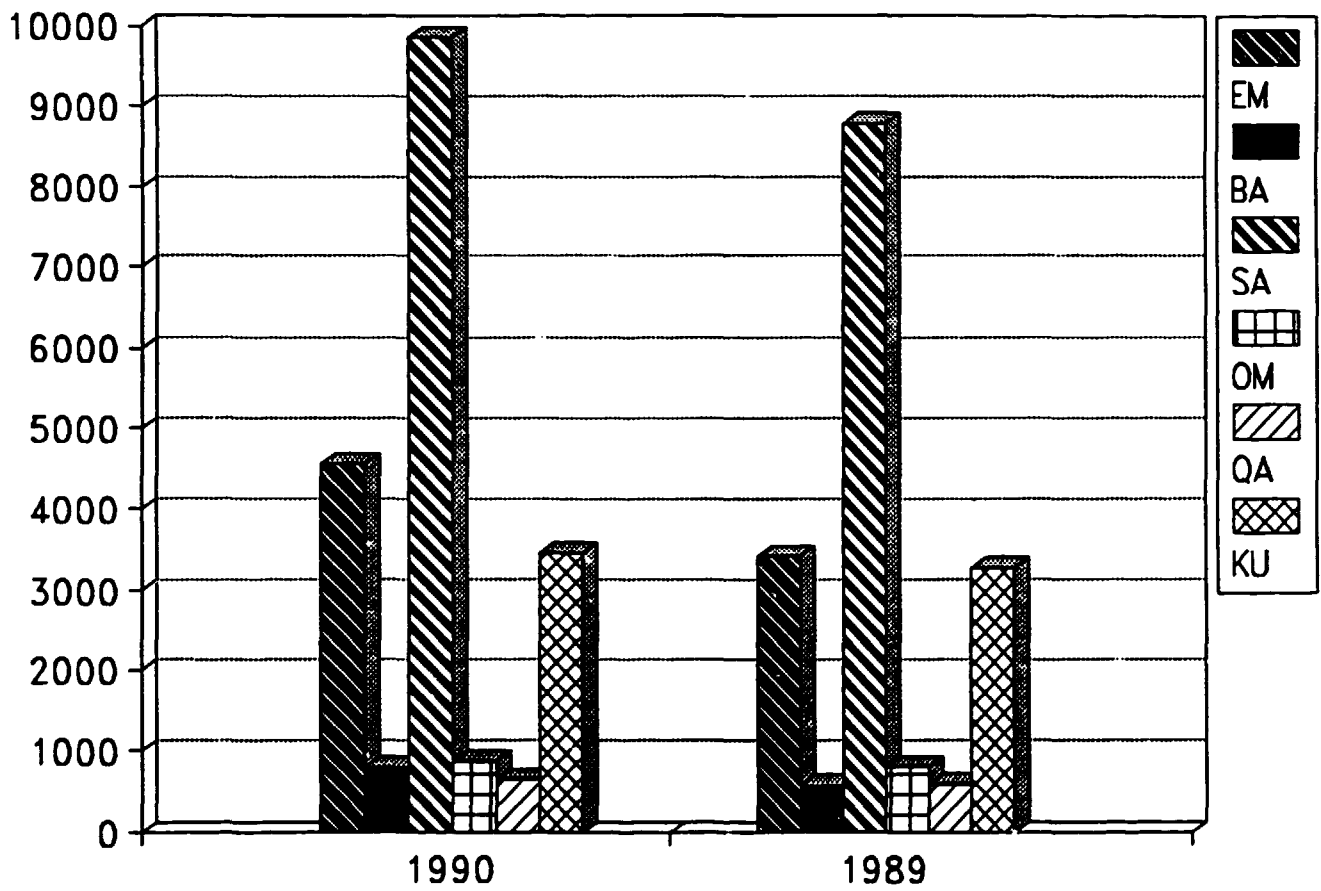


## COMPARING ACTUAL PRODUCTION BETWEEN LAST YEAR AND LICENSED

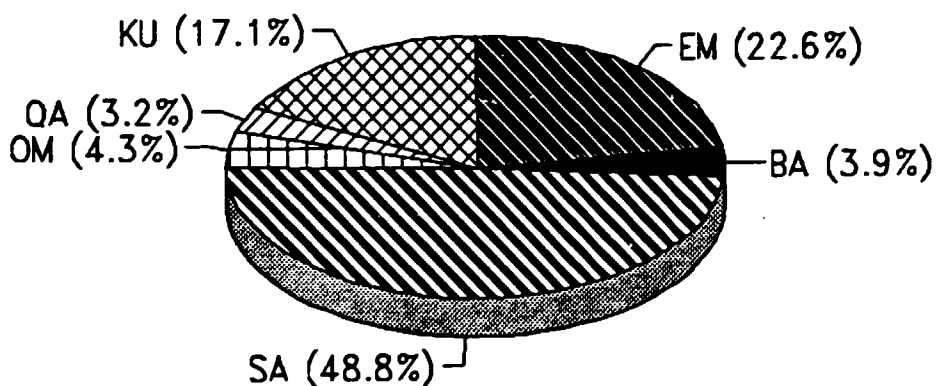




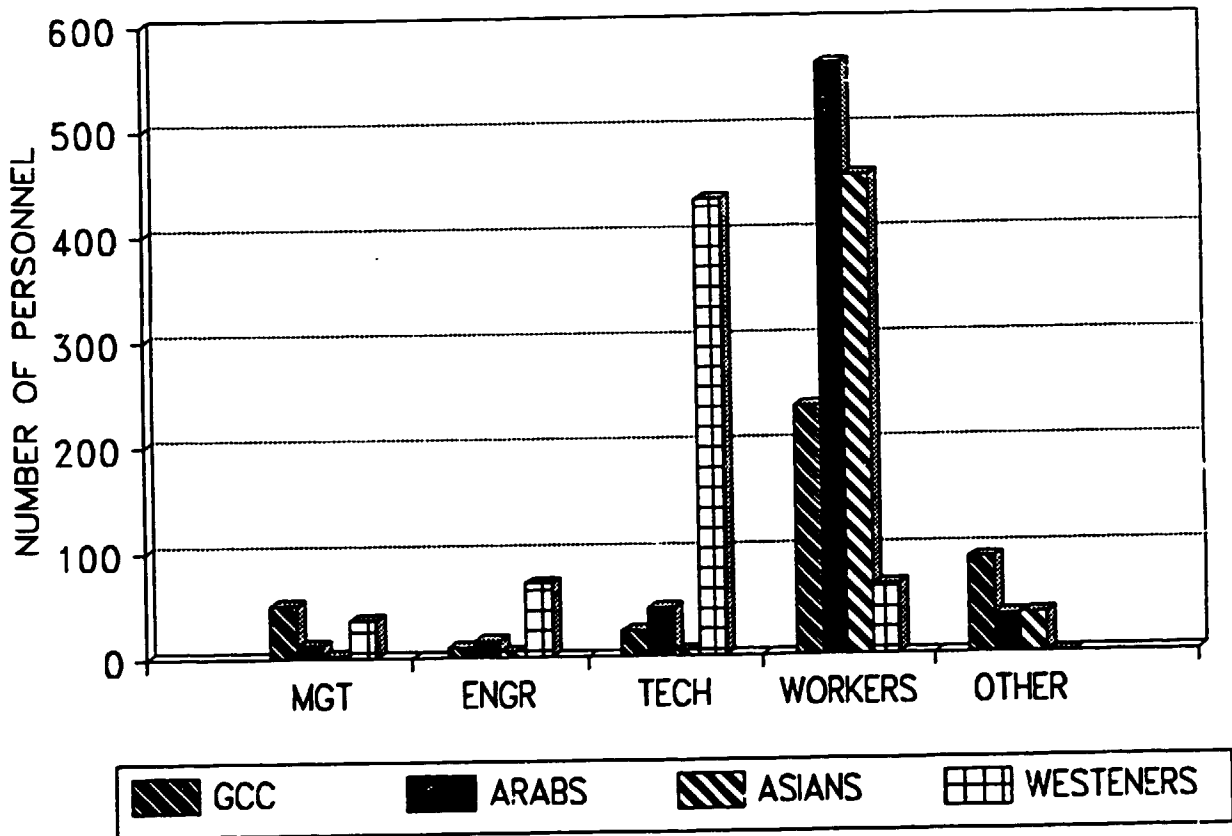
### ACTUAL PRODUCTION OF EACH GCC MEMBER COUNTRY DURING THE LAST TWO YEARS



# PERCENTAGE OF ACTUAL PRODUCTION OF ALL GCC MEMBER COUNTRIES LAST YEAR



# REPRESENTATION OF MANPOWER ACCORDING TO SPECIALTY



## REPRESENTATION OF TOTAL MANPOWER BY NATIONAL GROUPING

