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INDUSTRIAL PLANNING AND PROGRAMMING

DP/GHA/82/030

GHANA

Technical report: Restructuring of the Ministry
of Industries, Science and Technology *
(Intermediate report)

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

Based on the work of Arno Maneck, consultant in
organization and management

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United Nations Industrial Development Organization
Vienna

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Explanatory Notes

Value of the local currency = Cedi (¢)
during the period of the mission in terms of
United States Dollars (US\$): US\$ 1 = ¢ 147.26

Abbreviations

ERP	Economic Recovery Programme
GRATCC	Ghana Regional Appropriate Technology Consultancy Centre
ISAC	Industrial Sector Adjustment Credit
MIST	Ministry of Industries, Science and Technology
PARDIC	Public Administration Restructuring and Implementation Committee
PNDC	Provisional National Defence Council

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Abstract

Within the framework of project DP/GHA/82/030 - Industrial Planning and Programming within the Context of Economic Recovery - a short-term consultant in organization and management was required by the Government of Ghana to refine the restructuring exercise for the Ministry of Industries, Science and Technology (MIST) and to produce recommendations on a new organizational structure for the Ministry.

This intermediate report deals with the results of the first phase of the mission with a duration of three weeks.* It describes the present organizational structure of the MIST and drafts for new structures, proposed by a World Bank team and the Public Administration Restructuring and Implementation Committee. Under consideration of the prevailing situation and submitted proposals the consultant recommends a refined version of an organizational structure for the MIST.

*) 4 - 22 December 1986

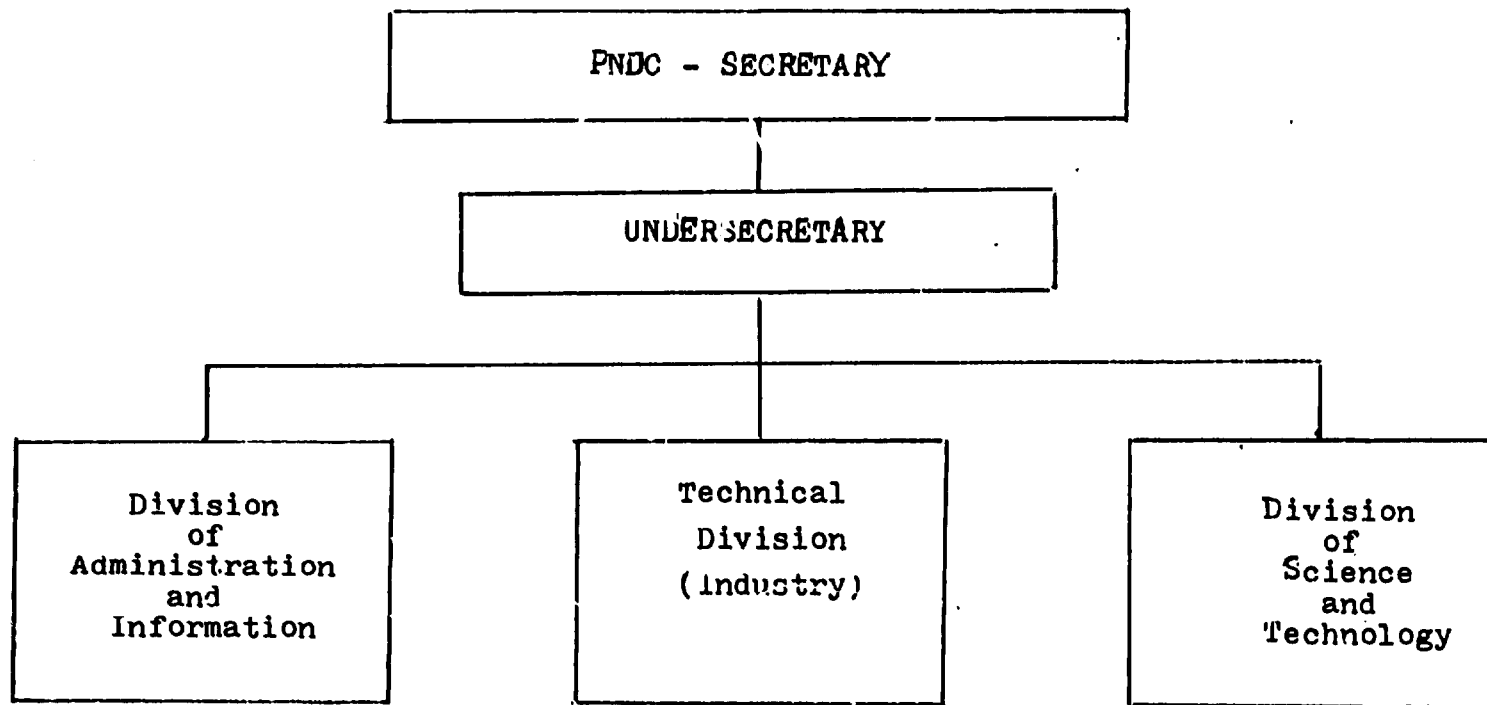
A. Present Organizational Structure of the Ministry of Industries, Science and Technology (MIST)

1. The supreme body of the Government of Ghana presently is the Provisional National Defence Council (PNDC), consisting of a Chairman and seven members. The PNDC is the strategy and policy organ on all matters of the Republic.
2. The Government consists of nineteen Ministries, headed by a PNDC-Secretary, who form the Cabinet under the chairmanship of one member of the PNDC and the Committee of PNDC-Secretaries.
3. Among them is the Ministry of Industries, Science and Technology responsible for formulation of industrial policy, interpretation and implementation of the industrial part of the Economic Recovery Programme (ERP) 1984 - 1986: preparation of national development plans for the industrial sector, promotion of new industrial investment, appraisal of industrial projects, controlling and monitoring of existing industries, implementing industrial adjustment programmes, formulation and promotion of industrial export programmes.
4. The Ministry is also responsible to formulate and implement science and technology policy, monitoring of related programmes and training activities.
5. The following semi-autonomous Commissions, Boards and Special Agencies work under the guidance and supervision of the Ministry:
 - (a) National Board for Small-scale Industries
- Ghana Regional Appropriate Technology Consultancy Centre (GRATCC)
 - (b) Ghana Standards Board
 - (c) Sugar Industry Board
 - (d) Council for Scientific and Industrial Research.

6. The Ministry is further responsible for the Ghana Industrial Holding Corporation and its parastatal corporations as well as a number of other manufacturing industries.
7. A Ministerial Advisory Board, assembled from other ministries, public and private industries and other institutions assists the Ministry in formulation of realistic policies and programmes.

Organizational Structure of the MIST

CHART A (Present Organization)



8. Present Staffing of the Ministry of Industries, Science & Technology

Designation of Posts	Established	No. At Posts
1. Principal Secretary	1	0
2. Principal Assistant Secretary	2	2
3. Senior Assistant Secretary	2	-
4. Assistant Secretary	4	2
5. Principal Executive Officer	2	2
6. Senior Executive Officer	3	3
7. <u>Personnel Officer</u>	1	1
8. Higher Executive Officer	3	2
9. Executive Officer	6	10
10. Clerical Officer	20	11
11. Senior Private Secretary	1	1
12. Private Secretary)	4	-
13. Stenographer Secretary)		
14. Stenographer I & II	4	12
15. Senior Typist	2	2
16. <u>Typist Grade I & II</u>	25	6
17. Senior Caretaker	3	1
18. Chief Messenger	1	1
19. Receptionist	2	-
20. Telephone-operator	2	1
21. Yard Foreman	1	-
22. Driver Mechanic	1	1
Total	90	57

Technical Division (Industries)

Designation of Posts	Established	No. At Posts
1. Principal Secretary	1	1
2. Chief Industrial Promotion Officer	3	-
3. Dept. Chief Industrial Promotion Officer	4	1
4. Principal Industrial Promotion Officer	5	4
5. Senior Industrial Promotion Officer	7	1
6. Industrial Promotion Officer	10	9
7. Assistant Industrial Promotion Officer	16	10
	Total 46	26

Division of Science & Technology

Designation of Posts	Established	No. At Posts
Principal Assistant Secretary	1	1

While the title "Chief Director" means a function within the Ministry, the aforementioned titles are ranks established in the Civil Service Rules and Regulations.

The functions and responsibilities, presently existing, for the Division of Industries and which are of major interest for this study, are broken down as follows:

Technical Division (Industry)

9. Present Distribution of Functions and Staffing

Sector	No. Of Staff
1. Principal Secretary	1
2. Food, Beverages and Tobacco	2
3. Electrical Ind. and Vehicle Assembling	2
4. Chemicals, Pharmaceuticals, Cosmetics	2
5. Wood, Paper and Printing	2
6. Plastics and Rubber	2
7. Leather	1
8. Metals	3
9. Non-Metallic and Miscellaneous	3
10. Textiles and Garment	2
<hr/>	
11. Programming Analysis and Monitoring	4
12. Multilateral Aid and Import Coordination	1
13. Bilateral Aid Cordination	1
14. Industrial Information	0
<hr/>	
Total	26

The Technical Division has not its own clerical and typing staff. This work is being taken care of by the staff of the Division of Administration and Information.

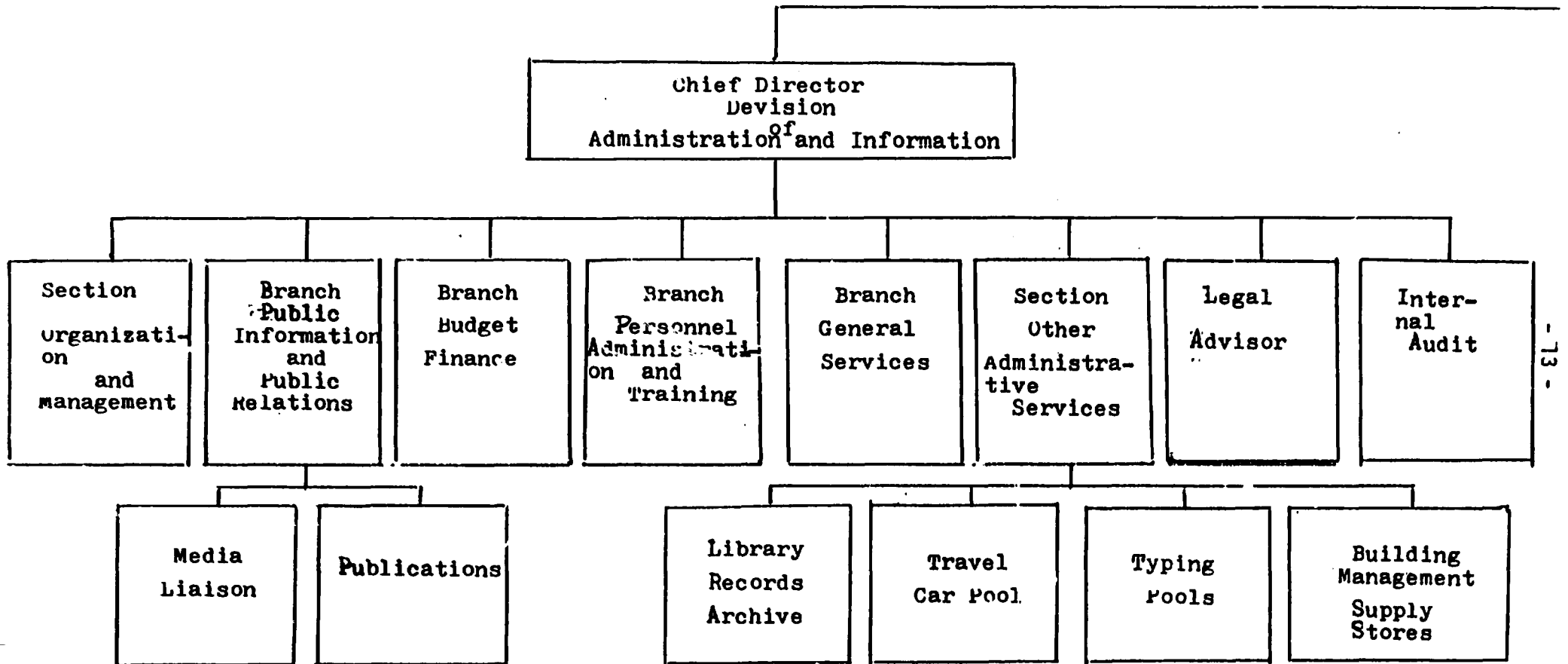
B. Restructuring of the Ministry of Industries, Science and Technology

1. In the interest of a more effective and more economically working Government machinery, in September 1983 it had been decided to set up a Public Administration Restructuring and Implementation Committee (PARDIC) to survey and review the present organization of public administration in Ghana and to make recommendations for work improvement of the Ministries. With the guidance of PARDIC, the Ministries are obliged:
 - (a) to review the existing work schedules in their organization, and propose new ones to reflect the new functions for the latter, keeping in mind the ratio of senior and supporting staff;
 - (b) to establish job relativities of work carried out in the ministries as against those in other public organizations;
 - (c) to list resources required to accomplish the work schedules described;
 - (d) to describe new work methods;
 - (e) to design a new work performance appraisal system ;
 - (f) to propose an improved staffing programme;
 - (g) to redesign a new organizational structure ;
 - (h) to consider a decentralization programme for public services;
 - (i) to propose a programme for monitoring and evaluating the progress of the restructuring work.
2. As far as the Ministry of Industries, Science and Technology is concerned the PARDIC recommendations coincided with the Ministry's decision to improve its industrial planning and programming work through the preparation of detailed sub-sector plans and operational programmes up to and including plant level. This exercise was partly started with the assistance of project DP/GHA/82/030 and will be intensified by the new project DP/GHA/86/001.
3. The Project Document of the latter technical assistance project has proposed a new structure of the Industry Division (Technical Division) which the consultant has taken as basis for his work. The proposal is the outcome of a World Bank mission which visited Ghana during the second half of 1985. From just technical work presently undertaken,

the future work of the division would concentrate on industrial research, policy analysis, programming, monitoring and manufacturing operations advice, based on reliable statistics. The core of the new organization would be four new divisions which should be established on the basis of World Bank proposal with some minor amendments and additions. Since the work of the consultant includes the whole Ministry his proposal is reflected in the following charts B, C and D.

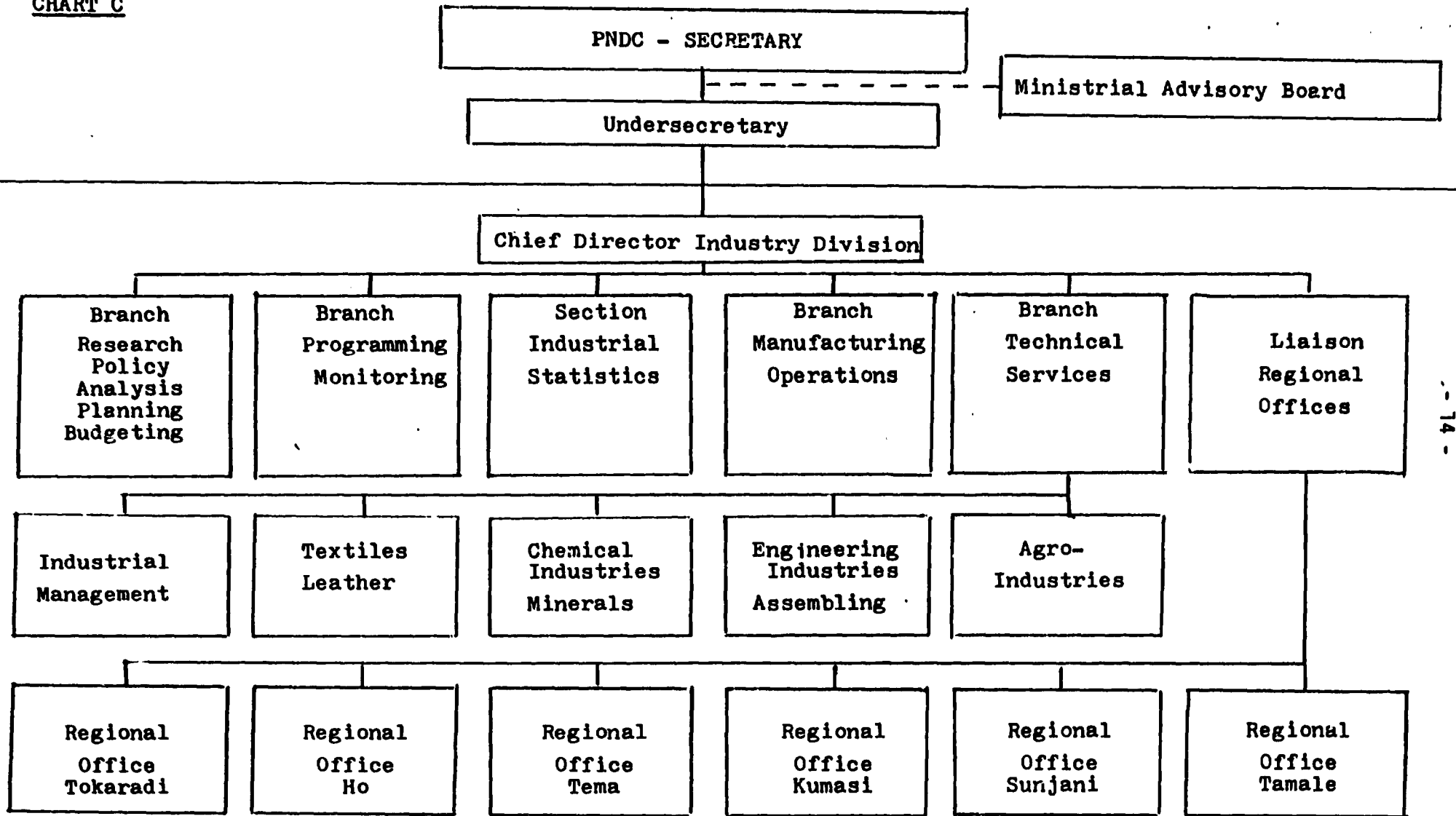
Organizational Structure of the MIST, proposed by the consultant - PART I

CHART B



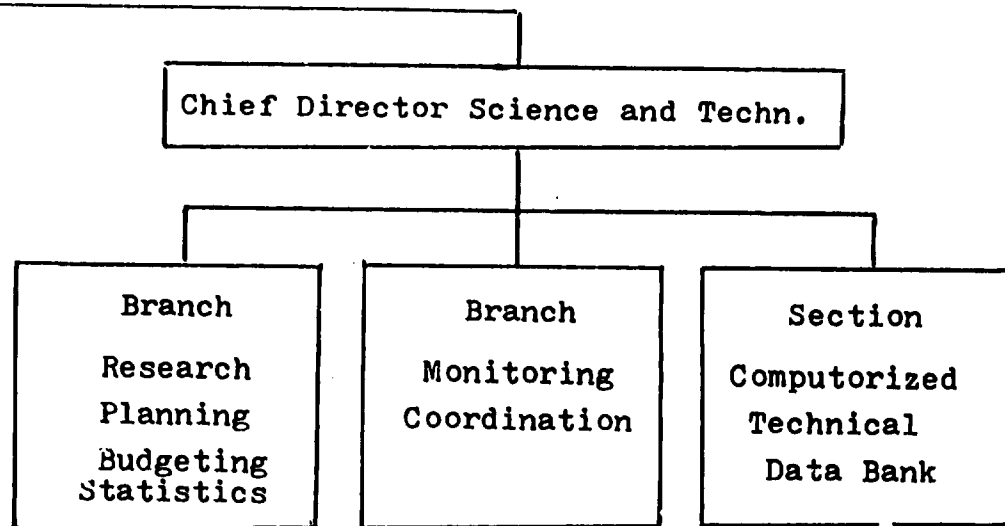
Organizational Structure of the MIST, proposed by the consultant - PART II

CHART C



Organizational Structure of the MIST, proposed by the consultant - PART III

CHART D



I. The Division of Administration and Information

4. To the benefit of the Ministry as a whole, the division should be strengthened by an additional Section for Organization and Management. Such an instrument is essential in modern administration. The section will work under the guidance and supervision of the Chief Director of Administration and Information, and will be responsible for organizational and management questions in order to improve the efficiency of the Ministry. In detail the Section for Organization and Management will be required to:
- (a) Study and monitor the performance of all units of the MIST;
 - (b) identify bottlenecks;
 - (c) identify unused or under-utilized human resources in the MIST;
 - (d) make recommendations for the use of mechanized office equipment and appropriate management methods in the interest of balanced use of personnel;
 - (e) update when necessary the organizational chart of the MIST while making suggestions for better distribution of work, functions and staff;
 - (f) conduct manpower surveys in order to secure a just distribution of workload among the staff;
 - (g) in cooperation with the Personnel Administration Branch and the Chief Director concerned, draft job descriptions before they will be channelled to Recruitment;
 - (h) advise on their rationality before new management methods will be implemented or new office equipment will be procured;

- (i) initiate and implement productivity improvement schemes in the Ministry;
 - (j) secure appropriate treatment of confidential correspondence and confidential matters;
 - (k) contribute organization and management advice to the studies and measures of the Branches for research, policy, planning, monitoring and operations of the Division of Industries;
 - (l) conduct organizational and management studies on parastatal or private industries, on request of the Division of Industry.
5. The in future extended objectives and responsibilities of the Ministry will involve many legal questions, specifically during the period of the implementation of the Industrial Sector Adjustment Credit (ISAC). A Legal Adviser is essential.
- In particular the Legal Adviser will be required to:
- (a) advise on and clear all contracts, obliging the Government, except normal employment contracts;
 - (b) advise on contract formulation regarding the Industrial Sector Adjustment Credit Programme;
 - (c) advise on disputes between staff and the Ministry;
 - (d) advise and assist in drafting of any legislation, rules and regulations;
 - (e) clear contributions of the Ministry to Development Plans;
 - (f) investigate on misconduct of personnel and eventual disciplinary action;
 - (g) represent the Ministry in legal affairs.

II. The Division of Industries

6. The main instrument of the Ministry for industrialization will be the Division of Industries. Its core will be the four new divisions scheme as suggested by the World Bank team and included in the Project Document for GHA/86/001. The functions and responsibilities, for the present time, are clearly and completely defined on pages 38 through 40 of the aforementioned document (Annex 1).
7. However, the consultant recommends the following amendments and supplements:

Vital for successful operations of the Branches for Research and Policy Analysis, Programming and Monitoring and Manufacturing Operations will be that reliable statistics are available to the necessary extent. Such statistics do not yet exist. The Ministry should follow the system by which all manufacturing industries, parastatal and private, would be obliged to report monthly in the form of a questionnaire about:

- (i) raw material supply;
- (ii) items under production;
- (iii) quantity of production;
- (iv) sales locally and exports;
- (v) personnel under contract;
- (vi) reasons for unused capacity, if any.

Such reporting system can easily be introduced if the Ministry uses its authority under Art. 9 of the Manufacturing Industries Act of 1971, promulgating the required regulations.

8. The nine technical officers, presently, are reporting directly to the Chief Director. In future they are expected to feed-in their technical knowledge in the four new branches. Further they will, from technical points, have to assist the Regional Offices. Since the Chief Director will be fully occupied by guiding the four new branches he should be relieved from direct work with technical officers and Regional Offices. In order to strengthen and coordinate the two groups of offices, two new units with small staff should be included in the new organization of the Ministry:

- Branch for Technical Services
- Regional Liaison Office

The two heads of the proposed units should:

- (i) guide and supervise the work of the officers;
- (ii) prepare a work programme;
- (iii) prepare a travel plan or just authorize travel;
- (iv) assign on an ad-hoc basis their staff for specific work of the four new Branches;
- (v) establish work priorities;
- (vi) in addition the Head of the Regional Liaison Office will have to secure support of the National Board for Small-Scale Industries.

The World Bank has proposed to unite the nine technical offices in just five. From the type of work they have to do this seems to be justified and may have a positive influence on the quality of their work. But, this question may be reconsidered during Phase II of this mission.

III. The Division of Science and Technology

9. The objectives and responsibilities of this Division have not yet been arrived at a final stage in view of missing staff. The Division should ensure: application of science and Technological research results to the national economy and should make recommendations for acquisition, adaptation and transfer of technology, training of technical manpower and development of research in infrastructure. The Division should be assigned two Branches and a third one operating a technical, computerized data bank. At the beginning the computer may also serve the Industrial Statistics Section or vice-versa.

C. Staffing of the Restructured Ministry

1. The restructured Ministry, as a consequence, will certainly require additional staff, particular staff with a specific background. The emphasis of the daily work of the Ministry will shift from more technical to policy, planning and programming.

Division of Industries

The Division would require the following additional personnel:

Designation of Posts	Senior Service	Clerical
Research Branch	4	3
Programming & Policy Branch	5	2
Statistics)		
Electronic Data Processing)	3	2
Programmer)		
Operations Branch	4	2
Technical Services Branch	1	1
Regional Liaison Office	1	1
TOTAL	18	11
GRAND TOTAL		29

2. It should be understood, as a rule of thumb, that the general administration of a Ministry should not be staffed more than 1/5 or 1/6 out of the total number of personnel. This does not mean that presently the Ministry is overstaffed. Regardless of how many substantive divisions in a Ministry exist, the necessity for an efficient administration is the same. This means that a minimum of administrative staff is always required to cope with the daily necessities of administration.
3. Apart from the assistance by expatriate personnel from project DP/GHA/86/001 the additional personnel for the Division can be made available by reprogramming of the present budget. Presently 53 posts of the Ministry are unoccupied due to a freeze of recruitment until the general restructuring exercise of PARLIC has been completed. Detailed recommendations insofar will be elaborated during Phase II of this mission.

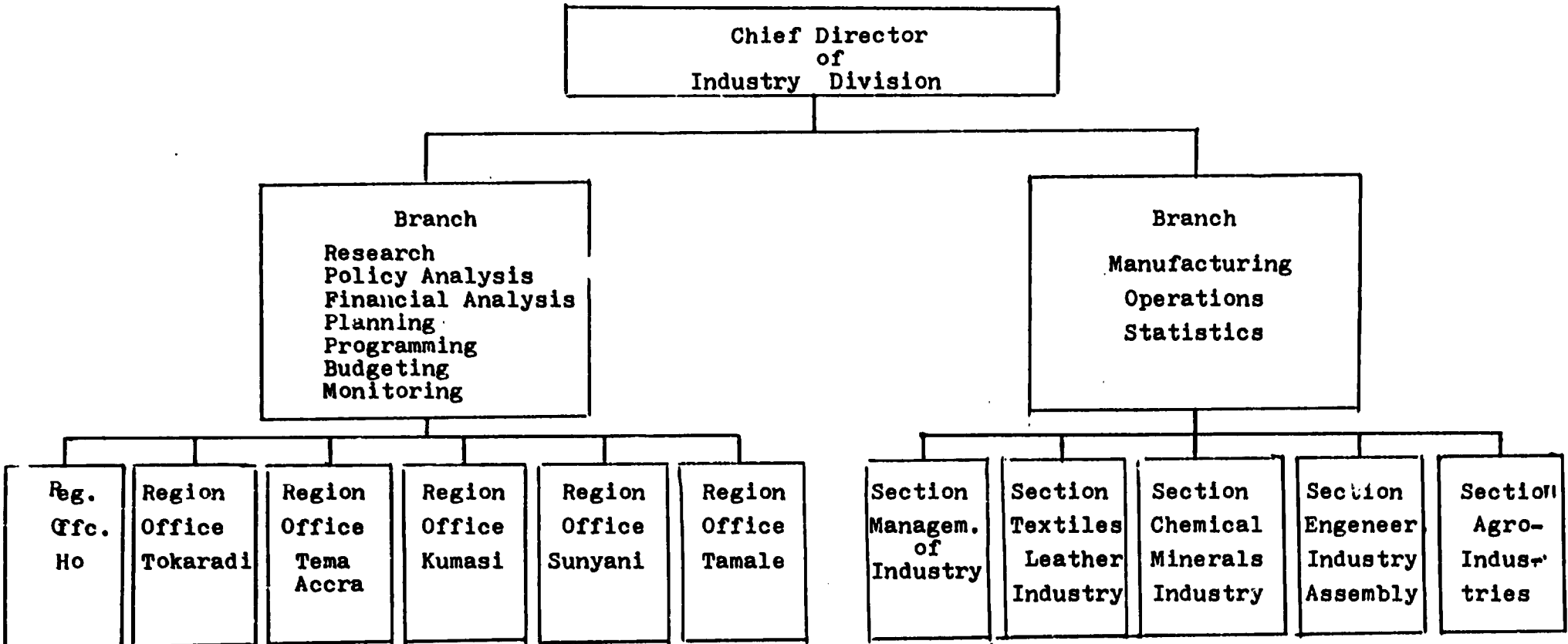
D. Intermediate Measures for Restructuring

In view of the scarcity of funds for Government agencies the implementation of a restructured organization may be delayed, which should be avoided in the interest of Ghanaian industries. In a meeting held with the World Bank Representative the possibility was discussed to start the restructuring for the beginning with a smaller approach. However, the research, policy and programming functions should not be curtailed.

Chart E reflects possible savings.

Organizational Structure of the Industry Division (Intermediate Solution)

CHART E



E. The PARDIC Pattern

A final meeting with members of PARDIC was planned after the recommendations of the consultant would have been discussed with the PNDC-Secretary for Industries, Science and Technology. This, unfortunately, never took place.

Hence, on 20.12.86, the last working day of the consultant in Ghana, a meeting with two members of PARDIC took place in presence of the MIST's Chief Director of Administration and her Deputy.

The PARDIC representatives introduced their work programme dealing with reorganization of all Ministries and decentralization of the responsibilities to the regional level and to specialized autonomous or semi-autonomous bodies. The new administration system of the PNDC-Government should distinguish from those of its predecessors as the boldest attempt at installing new national management capacities and new management techniques, particularly in the areas of planning, programming and budgeting, into the work of all public servants. The subject matters in ministerial organization should be organized through the following points, referred to as Divisions in a Ministerial Organization, namely:

- (i) Policy Planning, Programming, Budgeting, Monitoring and Evaluation;
- (ii) Research, Statistics and Manpower Development;
- (iii) Information, Management and Public Relations;
- (iv) General Administration.

The essence of this arrangement is that the subject matter of specialist working through these four job points will have to reflect the main function of that particular division in the Ministry. The Ministry personnel therefore should be forced to concentrate on the coordination of policy planning, etc. which is a responsibility which only a ministerial

organization should have for a sector of the economy. Under these circumstances, the Ministry is least likely to engage in implementation activities since there will be in future no such division in a Ministry. The organizational structure of the MIST as considered by PARDIC is shown in Chart F.

The consultant drew the attention of the PARDIC representatives to the fact that under the Industrial Sector Adjustment Credit Programme the MIST, at least to some extent, will be responsible for implementation of promotional activities, industrial coordination on national and international levels, supervision of parastatals and operative support for industrial development.

It was felt that in the past the useful elaborations on an effective organizational structure of the MIST were made by all parties (MIST, PARDIC, World Bank, project DP/GHA/82/030) more or less in isolation from each other, not considering background and experience of all parties involved.

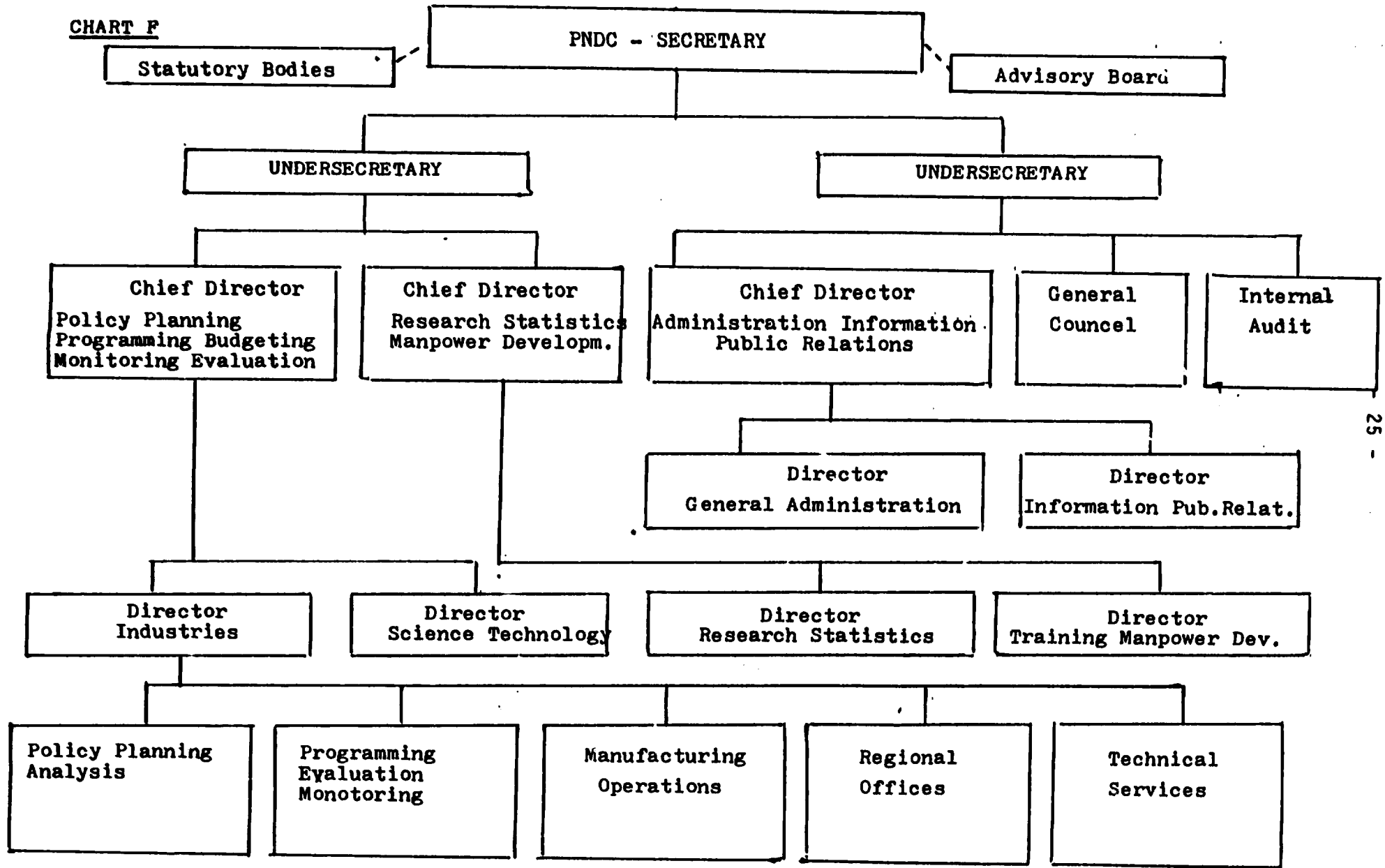
F. Activities of the Second Phase of the Mission

One of the purposes of this intermediate report was to present the problem and possible solutions thereto. In this way it might contribute to the preparation of an effective organizational structure for the MIST.

During the forthcoming second phase of the mission this work should be continued. The second phase will commence after receipt of the reactions from the relevant authorities on the recommendations in the intermediate report and after arrival of the UNIDO Chief Technical Adviser for project DP/GHA/86/001. This second phase will result in the agreed-upon organizational arrangements, detailed job descriptions and administrative regulations as well as a transition programme including the identification of new assignments for incumbent staff and a timetable for adjustment.

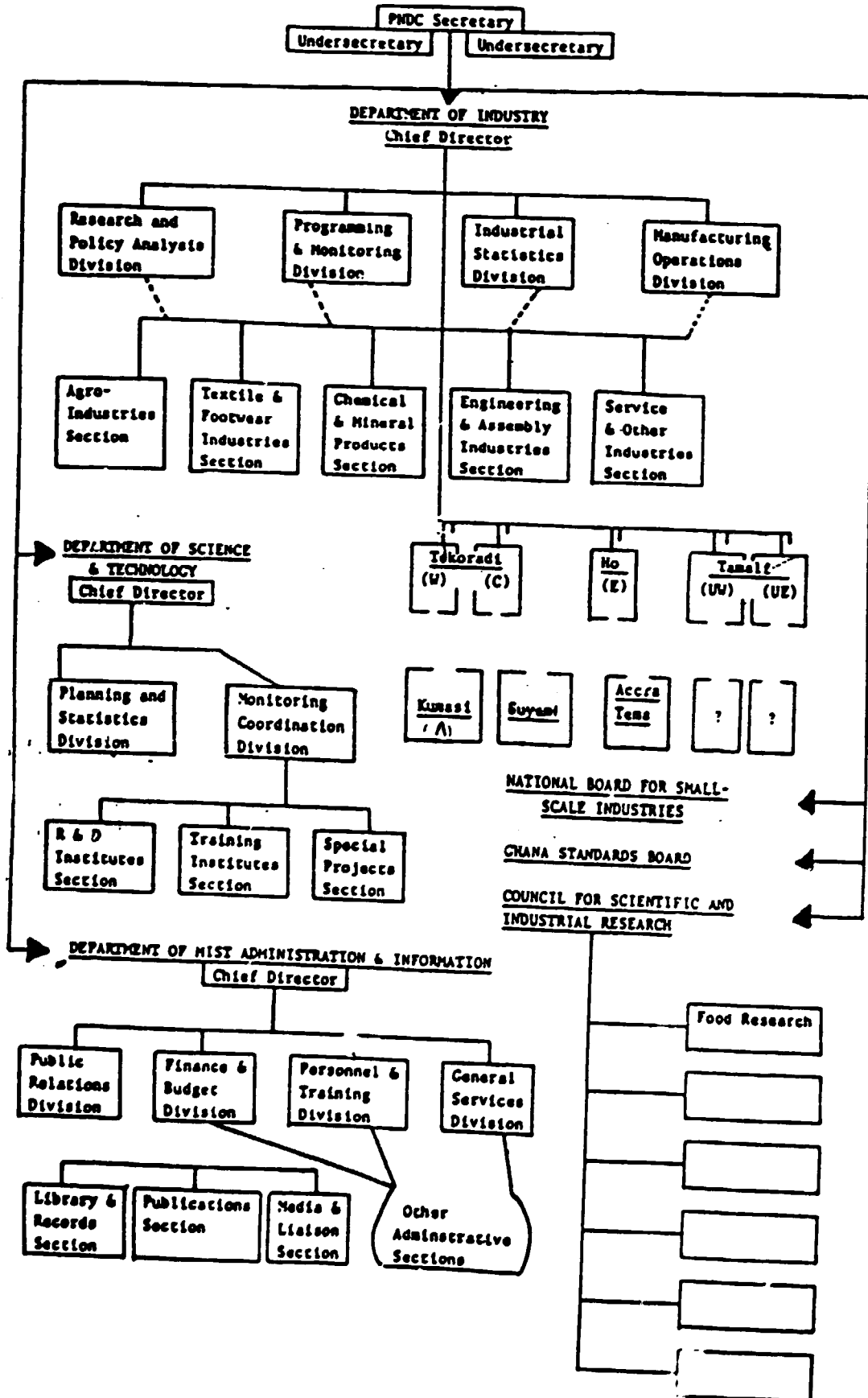
Organizational Structure of MIST as under consideration by PARDIC.

CHART F



INDUSTRIAL SECTOR ADJUSTMENT CREDIT

Chart 1: PROPOSED ORGANIZATION STRUCTURE FOR THE MINISTRY OF INDUSTRY, SCIENCE AND TECHNOLOGY



IND Research and Policy Analysis Division (RPD)

8. The Division will be responsible for (a) problem and impact analysis through the conduct of subsector, policy and other studies; (b) on the basis of the above studies, the draft formulation of proposals for (i) macro-economic and other policy reform; and broad parameters of (ii) subsector development programs, especially those relating to protection and other policy considerations, intersectoral linkages and infrastructural requirements, (iii) special development programs and (iv) structural changes in state ownership of industrial enterprises; and (c) the preparation of reviews and other material for publication on trends and developments in the sector.

9. IND/RPD should be headed by a senior industrial economist and staffed by four or five permanent officers who, in combination, have experience in industrial planning, financial analysis, international trade economics, marketing and technology for policy analysis. Until sufficient expertise can be developed among regular officers recruited anew or transferred from existing MIST units, it would be desirable to have local consultants attached to the Division, one or more as "contract staff" This would reduce the need for external assistance, other than to guide the initial operations of the Division, assist the execution of particular subsector and other studies on an ad hoc basis and help develop staff research skills.

IND Programming and Monitoring Division (PMD)

10. The Division will be responsible primarily for the more detailed preparation, as well as the management or support, monitoring and evaluation of subsector and other industrial development programs. A second important function of the Division will be the detailed development, management and monitoring of special programs for policy measures whose implementation is entrusted to the Ministry. In the immediate future the main programs of this type concern (i) licensing of industrial input imports, (ii) support for the financial and technical rehabilitation of industrial enterprises which would be unable otherwise to operate efficiently, (iii) management of the privatization, closure or restructuring of state-owned industrial enterprises, and (iv) coordination of external assistance. IND/PMD will also be responsible for monitoring the sector's performance including trends in growth of value-added, manufactured exports, upstream resource development and industrial manpower supply and demand.

11. IND/PMD should be headed by a senior official with a background in industrial economics or engineering and experience in program management. It will require about six other permanent staff who might be assigned as follows: (i) two or three subsector programs, (ii) two or three other subsector programs, (iii) import licensing, (iv) project appraisal, (v) aid coordination and special programs, (vi) rehabilitation and state enterprises. Although additional staff might be required as industrial investment and activity expands, the Division should remain compact in

order to rely as far as possible on the subsectoral sections' field expertise and to avoid duplication of function with IND/RPD, ISD and MOD. During its first year or so some local and external consultancy support will be needed.

IND Industrial Statistics Division (ISD)

12. The Division will be the main agency for coordinating or undertaking the collection, compilation and analysis of industrial and other statistics needed as an information base for the management, monitoring and promotion of efficient industrial development. Apart from the statistics themselves, the Division will be the focal point for the ministry's data management system, in cooperation with the proposed Library and Records Section. IND/ISD should be staffed by a senior industrial statistician and two or three other officers. During its first year or so, it will also require local and some expatriate consultancy assistance to help the development of staff expertise and the establishment of collection and collation procedures and methodologies.

IND Manufacturing Operations Division

13. The Division will have three principal functions. First, it will lead the provision of technical assistance to state-owned and private enterprises in the industry sector; in the immediate future, an important task will be to organize enterprise-level studies to design or screen rehabilitation project proposals. Its second function will be to organize infrastructure development activities, and its third will consist of executing the Ministry's regulatory responsibilities with respect to factory licensing, industrial safety and health including pollution control.

14. The Division should be headed by a senior official with engineering and managerial experience in manufacturing operations. Staffing levels will depend on the scope of work; initially four or five officers may be sufficient to handle the tasks which will commence in 1986-87, assuming that local and some external expertise on enterprise restructuring will need to be retained on an ad hoc basis. A distribution of staff functions might be (i) technical assistance to private firms, (ii) SOEs and project appraisal, (iii) development projects and (iv) licensing and inspection. Even in the longer term, the division staff size may be modest since much of the work for which IND/MOD is responsible will be actually carried out by section staff in the respective subsectors.

IND Subsector Sections

15. The five sections of the Department will contain subsectoral expertise pertinent to all four divisions' functions. They will maintain regular liaison with large and medium-large enterprises and keep records of smaller enterprises to enable them to:

- (a) participate with IND/RPD in studies to analyze problems and policy impact on subsectors or industries;
- (b) participate with IND/PMD in the preparation, implementation and monitoring of (i) subsector and industry development programs and (ii) special programs on import licensing, enterprise rehabilitation and SOE restructuring;
- (c) collect enterprise statistics for IND/ISD;
- (d) undertake field work for IND/MOD with respect to (i) technical assistance to public and private enterprises, (ii) MIST development projects, schemes and arrangements, (iii) factory licensing, safety regulation and non-statistical data gathering, and
- (e) perform such other functions as may be required by the Chief Director of Industry, to whom the section heads will report.

16. Between 21 and 26 officers could be needed to staff the five sections including their heads who should be experienced officials with detailed knowledge of at least one of the industries grouped in the subsector and general knowledge of the others. The head should be supported by between two and six other officers, each with responsibility for one of the several industries in the subsector group.

MIST Regional Offices

17. In the interest of decentralization, as much of the Ministry's field work as possible should be assigned to staff posted to the MIST Offices to be established outside Accra. ^{1/} These offices of the Department of Industry will service also the Department of Science and Technology and the Small-scale Industries Board in the meantime. They may also provide agency and/or physical facilities for the Ghana Standard Board, Ghana Investment Centre and other agencies which are associated with industry or with science and technology but which do not have their own outposts. Initially each office should be staffed by an experienced officer at the section head level with at least one assistant, although some of the offices may be enlarged as manufacturing investment expands at regional locations and as the Ministry becomes more able to focus on the needs of small-scale industry and to decentralize its functions.

^{1/} It is assumed that there will be 10 offices including the headquarters servicing Accra and Tema. So far there are six, covering eight of the 10 regions.