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**IDDA Short-term Technical Advisory Service for  
the Preparation of an Industrial Master-Plan  
in Nigeria**

**Final Report  
(with Annexes and Attachments)**

by

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This Document has not been edited.

**REPORT OF THE IDDA SHORT-TERM TECHNICAL ADVISORY SERVICE FOR THE PREPARATION OF AN INDUSTRIAL MASTER-PLAN FOR NIGERIA**

**INTRODUCTION**

Arising out of the interest generated at the Abuja Workshop on Industrial Strategies and Industrial Master-Plan, (MIF), the Government of Nigeria requested UNIDO to render technical assistance on the preparation of the IMP and to set up the institutional framework for the strategic management of the industrial sector.

While the project document for the above technical assistance was undergoing the process of approval, this short term technical assistance was organized to work with the already established National Committee on Industrial Development (NCID) to lay the institutional foundation and undertake some preliminary work in preparation for the main task of elaborating the guidelines for an Industrial Master-Plan (IMP). Specifically other terms of reference include:

- to develop criteria for identifying and selecting key industrial sub-systems;
- to design proposals for the institutional framework of the Strategic Management of Nigeria's Industrial Development (SMID)
- to elaborate a detailed work programme for the preparation of the guidelines for the SMID/IMP and
- to carry out other relevant assignments as may be required by the Chairman of NCID.

The remainder of this report is organised under four headings:

- Institutional framework established
- Identifying and selecting industrial sub-systems
- Work programme adopted
- General observations.

### **INSTITUTIONAL FRAMEWORK**

#### **(a) National Committee on Industrial Development (NCID)**

This body had been set up prior to the National Workshop held in September 1989 to perform the functions of a national coordinating body is envisaged by IDDA I programme for holding National Workshops. Since the workshop, it has been transformed to become the focal consultative body comprising representatives of economic ministries at the Federal level, ministries responsible for industrial matters at the state level, para-statal dealing with industrial matters or infrastructural facilities, apex organisations of manufacturers, chambers of commerce, association of small scale industrialists and research institutes. The chairman Mr. Rasheed Gbadamosi is an economist by training, he has been a commissioner (minister) at the state level (Lagos State) and is an industrialist. He is currently the Chairman of the Nigerian Industrial Development Bank.

Two meetings of this body have been held since this year. The first on 29th and 30th March and the other on 17th May, 1990. The first received and reviewed the report of the Abuja Workshop, the recommendations and the next line of action. The consultant led the discussion on this. This was followed by a discussion and adoption of a draft work programme prepared by the Management Support Group (see

below). Three papers (two by the Policy Analysis Dept. and one by a member of the Management Support Group) were presented and discussed.

The P.A.D. papers were entitled

- (a) Industrial Masterplan for Nigeria: Concept, Objectives and Strategies.
- (b) Criteria for the Identification of Industrial sub-systems for the Industrial Master Plan.

Actually both papers were prepared by Dr. Ode Ojowu, a senior lecturer in Economics at the University of Jos seconded to the Policy Analysis Department for the purposes of this project. In the first paper, he dealt with the importance of a master plan as a means of minimizing the problems of policy and programme inconsistencies in the development of a nation's industry.

According to him, "the IMP is similar to building a dynamic general equilibrium model to facilitate a clearer grasp of the inter sectoral resource flow and their implications." The paper then went on to discuss the objectives of an IMP as well as the strategies for the preparation and implementation of the IMP. (Annex 1A)

The second paper dealt with the criteria for identification of industrial sub-systems: It started with a discussion of the concept of systems and sub-systems, and made the point that "the choice of sub-systems must have as their reference point, the overall socio-economic objectives of the nation. In addition, it must also address the specific objectives of

industrial policy (these are discussed in the paper). The following criteria were identified to guide the choice of industrial sub-systems

- Linkage potentials
- Self sufficiency and Domestic Raw Material Sourcing potentials
- Domestic Resource based Industries and the market orientation/potential
- Potential for competitiveness and New Product Creation
- Industrial Dispersal and Employment Potentials
- Technology Promotion
- Strategic Industries

These criteria were to be subsequently applied to the actual choice. ( See Annex 1B)

The paper by Mrs. O. Ajayi of the Research Department of the N.I.D.B. dealt with the Role and function of Strategic Consultative Groups. It noted that at the heart of the Strategic Management process was consultation and concerted action. Therefore, it is important that in constituting a Strategic Consultative Group, all the relevant actors in the network are represented. A diagrammatic representation was given (Annex 1C)>

During discussions, the consultant elaborated more on the concept of Strategic Management of Industrial Development (SMID) as the process that will produce, and monitor the implementation of the industrial masterplan. He pointed out that SMID differs from the older concept of Industrial Masterplan in the sense that it is an action-oriented master strategy for the formulation, implementation and monitoring

of a coherent set of policies, programmes and projects that will lead to the development of a competitive and efficient industrial system. He explained that the work of the committee (NCID) will fall into four phases .

- Establishing the consultative Process
- Identifying and selecting priority industrial sub-systems
- Constituting Strategic Consultative Groups
- Drawing up Guidelines for the S.M.I.D.

To be able to do this both Government and UNIDO are cooperating to establish a Technical Support Group and a Management Support Group. Both of these will be responsible for conducting studies and providing of NCID with the necessary information and data for their work.

Members were enthusiastic about the SMID approach, but expressed the view that the concept needed wider publicity, especially among government functionaries so that they will understand it as a practical approach to installing a private sector led industrial development. There were some discussion of sub-systems and how to identify them. It was also emphasised that efforts should be made to ensure that the outcome of the work of the NCID dovetails with the Perspective Plan of the Government now under preparation by the office of Budget and Planning in the Presidency.

- (b) The second meeting of 17th May was ill-prepared for the task of identifying and selecting industrial sub-systems, because all efforts to get the P.A.D. to release the studies it said it had done failed. Nor did they produce the input/output matrix of the sub-sectors they had done. However, two working papers were prepared for this meeting

- "A note on Choosing Industrial sub-systems" by the UNIDO Consultant and
- "Priority sub-systems for Strategic Management under the IMP" by Dr. Ode Ojowu. (Annex II A & B)

The 'note' was produced for members of the Management Support Group as well as PAD to highlight the kind of information base required for identifying and selecting industrial sub-systems.

Dr. Ojowu's paper applied a ranking technique to the criteria earlier identified, and applying these to the four critical priority sub-sectors - Agro allied, Chemical and Petrochemical, Engineering and Metallurgy and Construction to arrive at the following weighted order of priority -

Engineering  
Chemical/Petrochemical  
Agro-allied  
Construction

While this provided a quantitative justification for regarding these sub-sectors as priority among priorities, it did not advance us further from what was agreed at the National Workshop in September 1989. Besides, the paper maintained that each ISIC sub-sector could be regarded as a sub-system and each division within the sub-sector regarded as a sub-set for study.

The consultant maintained that it would be preferable to retain the term "sub-sector" for what is internationally known as industrial sub-sectors and the term "sub-system" for those net-work of relations around particular products



or processes or market, especially as regarding a sub-sector as a sub-system is likely to be unwidely. The matter had to be resolved in a very practical way at a subsequent meeting. (See below)

#### MANAGEMENT SUPPORT GROUP (MSG)

This presently comprises the Chairman of NCID, the UNIDO Lead Consultant, two very senior research fellows drawn from the Nigerian Industrial Development Bank (one, an economist, the other a mechanical Engineer); the Director of P.A.D. a National Coordinator of the project working as a counterpart to the UNIDO Lead Consultant and the Secretary of NCID. This group meets from time to time to consider issues that should be put before the NCID and eventually the SCG's. This group was responsible for preparing the draft programme of work considered by the NCID on 29th March. It has so far met fifteen times. As from July 1, it is proposed to recruit the Research Fellows from NIDB on a full time basis for nine month .

Secretariat: The Secretariat of NCID has been established and housed on the 5th Floor of the NIDB Building. As the volume of work increases, it may have to move to another location. The Secretariat is headed by Alhaji S. Ahmed, a Senior Administrator drawn from the Federal Ministry of Industries. He has an Assistant Secretary and few support staff. As the work load increases, there will be need for more staff. Secretarial support for the Chief Technical Advisor will go a long way to increase the capacity of the secretariat to service the consultative groups. Additional space is now being sought on the same floor to house the Consultants, the National Coordinator and the Secretarial Support personnel.

**Technical Support Group:** The Honourable Minister has designated the Policy Analysis Department of the Ministry, which will now incorporate the Industrial Data Bank located at Abuja, as the technical support group. Two senior lecturers from the Universities of Jos and Ahmadu Bello have been seconded to the P.A.D. One of them Dr. Ojowu has been designated as the National Coordinator of the project. The P.A.D. is equipped with an IBM System 2/80 with ten terminals. A Prof. Giwa is working on contract from UNDP to activate the Industrial Data Bank at Abuja. He is liaising with Federal Office of Statistics to collect and analysis industrial survey data in Federal Office of Statistics (which have not been processed) for input into the Industrial Data Bank. At a meeting in Ibadan (25th May 1990) it was not exactly clear what can now be got from the data bank. In order to facilitate the work it was decided that a smaller committee made up of the research fellows from the NIDB and the lecturers seconded to P.A.D. should form a data collection/processing committee, to meet more often with the data bank staff and ensure the relevance of what is being collected.

**STRATEGIC CONSULTATIVE GROUPS (SCG)**

These have not yet been formed as the NCID is still in the process of identifying and selecting priority industrial sub-systems.

**A note on Choosing industrial sub-systems:**

In the course of this short term assignment, there developed a considerable degree of disagreement over (a) what constitutes an industrial sub-system and (b) how one procedurally identifies and selects priority sub-systems.

From the literature available to me, the job of choosing a sub-system is deceptively simple. According to Mr. F. Richard in his paper "Strategic Management of Industrial Development: Basic Principles and Methodology", he states that

"An industrial sector is made up of a more or less homogeneous set of industrial sub-systems. These sub-systems are set up and developed around the transformation of agricultural or mineral resources, the exploitation of a final market or the setting up of a production process" (1)

But according to the International Standard Industrial Classification (ISIC), an industrial sector is sub-divided into sub-sectors and within each sub-sector there are sub-sub-sectors or subsets. But as one understands it, an industrial sub-system is not co-terminous with either a sub-sector or sub-set because an industrial sub-system will include (a) industrialists (b) suppliers of inputs (c) suppliers of services (d) policy makers.

How does one then identify a sub-system? According to Richard "One has to establish the network of activities, production and services which revolve around a final market and/or resources, and/or a production process. Each I.S.S. is defined by a basic organisation which includes all the enterprises and institutions which take part in the functioning of the sub-system" (2)

In the case of Nigeria, this creates a problem. Take a sub-sector Textiles. According to the Federal Office of Statistics there were in 1983, 43 firms in Spinning and weaving, 18 in made-up textiles, 15 in knitting, 8 in carpets and rugs, 6 in cordage and ropes and 52 in wearing apparels, giving a total of 143 firms. An industrial sub-system will include suppliers of input and services. Here we have thousands of small scale cotton farmers, we have hundreds of middlemen (commodity buyers and merchants), transporters etc and institutions and associations such as polytechnics offering courses in textile technology, Nigerian Textile Manufacturers Association, Cotton and Textile Research Institutes. We must not forget local suppliers of dye-stuff and other chemicals. And what of operators in the informal sector where we have thousands of men and women operating cottage industries - spinning, weaving, dyeing, and the producers of their simple "jennies and looms" So when we say "all the enterprises and institutions which take part in the functioning of the sub-system", it must be realised that to be comprehensive, "all" must mean "all". But whereas it is possible at, the level of studies to take "all" into consideration, when it comes to forming Strategic Consultative Groups, only a representative group can function. In the case of Food Processing Industries, there were in 1983, 627 firms ranging from Meat preparation, Dairy products, fruits and juices to bakeries and Sugar factories. One can see potential conflict areas between grain millers and oil seed and Fats producers. Should Food Processing be considered a sub-system? Or should we go to a lower level of disaggregation?

On the procedure for identifying the industrial sub-systems, Mr. Richard's paper says this is done in a pragmatic way through the analysis:

- "of the configuration of the industrial fabric and inter industry relations

- the dynamics of organisational and industrial integration that may be developed;
- the potentialities of valorisation of national resources;
- and the national, sub-regional and international market potentials which may be catered for by the industrial sector."(3)

In a recent document from the Planning Branch (Nov.1989) entitled "A note on the concept of Strategic Management of the Industrial Development", it states that the identification of relevant sub-systems is usually drawn out of

"an intra-industrial flows matrix, highlighting several subsets of the industrial sector matching the definition of "sub-systems". The same matrix, after suitable manipulations, provides the quantitative framework necessary to select priority sub-systems."(4)

Without the benefit of a detailed manual of procedure on how to "manipulate" our intra-industrial flows matrix, we proceeded as follows:

1. During the National Workshop, three sub-sectors of industry had been identified as being critical to the objectives of self-reliance and self sustaining growth, namely
  - Chemical sub-sector
  - Engineering and Metallurgy sub-sector
  - Agro-allied sub-sector

2. In one of the papers prepared by Dr. Ojowu for the Policy Analysis Department, he applied a weighting technique to the following operational objectives
- linkage potentials
  - self sufficiency and local raw material sourcing
  - domestic resource based industries
  - potential for competitiveness and new product creation
  - industrial dispersal and employment creation potential
  - technology promotion
  - strategic industries

By applying these weights to the sub-sectors, he arrived at a ranking of

Engineering  
Chemicals  
Agro-allied and  
Construction sub-sectors

But he called these sub-sectors industrial sub-systems". We have since agreed that these will be referred to as sub-sectors in order to agree with the ISIC classification, and to reserve the term "industrial sub-systems" for the network of business relations around the subsets of the sub-sectors. At a meeting in Abuja (attended by the back stopping Officer, Mr. Mueller) the steering committee of the NCID proceeded in a very pragmatic manner to choose the following as the priority industrial sub-systems for the strategic management pilot study.

1. Engineering
  - (a) Foundaries and Metallurgy
  - (b) Automotive Engineering and Assembly
  - (c) Metal Fabrication

2. **Chemical and Petrochemical**
  - (a) **Rubber and Plastic Products**
  - (b) **Pharmaceuticals and Para-pharmaceuticals (baby food, body care products etc)**
  
3. **Agro-allied**
  - (a) **Food processing**
  - (b) **Leather and leather products**
  - (c) **Textile and Wearing Apparels**
  
4. **Construction**
  - (a) **Non-metallic mineral building materials.**

In choosing these as priority sub-systems, we were influenced by the following considerations deriving from earlier studies and our knowledge of the Nigerian industrial scene:

1. **Potential impact on other aspects of socio-economic development as a major creator of internal engines of growth;**
2. **Contribution to self reliance and self sustaining growth;**
3. **Potential for high local value added;**
4. **Net Foreign exchange saving potential;**
5. **Net foreign exchange earner;**
6. **Existence of industrial/Trade organisations around which an S.C.G. can be built; and**
7. **Geographical spread**

In our contact with the organised private sector we found that the three apex organisations already have sub-sectoral organisations covering each of the industrial sub-system selected above.

## WORK PROGRAMME

The National Committee on Industrial Development at its third meeting adopted a work programme which it was thought would lead to the production of guidelines for the industrial master-plan by November 1990. This has now been found to be unrealistic and has therefore been revised as detailed below. The timing of the various activities and the schedule of events have been affected by two things. (1) The present military administration is committed to handing over power to an elected civilian administration by October 1992. It therefore wants, on the economic scene, to see the Structural Adjustment Programme taking root and having an impact on the effort to create a self-sustaining and self-reliant economy. Government also plans to issue the guidelines in 1990 orderly in 1991 to allow the whole process of SMID to be firmly on course before civilians take over in 1992. (2) Secondly, it anticipates the Second Industrial Development Decade for Africa and the Africa Industrialisation Day (Nov. 20) and would want the GUIDELINES to be ready, and if possible launched as the National Programme for the Second IDDA.

The work programme therefore envisages:

- identifying industrial sub-systems from selected key priority sectors;
- selecting a few of these for a pilot scheme;
- conducting in-depth study of these and establishing alternative scenarios for development;
- establishing Strategic Consultative Groups for the pilot schemes, organising their meetings to choose strategic directions for their development;



- international experts will be brought in to translate the recommended strategies into operational action programmes as well as measure aimed at the policy environment infrastructure and other support activities.
- study tours
- preparing the guidelines based on experience and information gathered in the process of dealing with the pilot scheme.

After launching the Guidelines, work on the pilot sub-systems will continue into phase 4-implementation and monitoring, while work will start on other sub- systems. (For details of the work programme see attached)

#### General Observations

##### Culture of Consultation

Noting that at the heart of the whole process of strategic management is consultation and concerted action, the Management Support Group has initiated visitations to key groups and organisations whose activities are relevant and critical to the successful orchestration of the S.M.I.D. So far, there has been visits led by the Chairman NCID to:

- Federal Institute of Industrial Research, Oshodi
- Raw Materials Research and Development Council
- Office of the President (Budget and Planning)
- Federal Ministry of Works and Housing
- Manufacturers Association of Nigeria

Other visits are planned for the very near future to:

- National Association of Chambers of Commerce Industry, Mines and Agriculture
- Nigerian Employers Consultative Association
- Nigerian Labour Congress
- National Electric Power Authority
- Nigerian National Petroleum Corporation
- Federal Ministry of Agriculture
- Federal Ministry of Mines, Power and Steel
- Several Sectoral Group Associations.

Judging from the interest shown in the few places visited, it is a worthwhile endeavour as a mean of popularising SMID/IMP as well as garnering support for information and data gathering.

**SUMMARY OF THE AMENDED NCID 1990 WORK PROGRAMME**

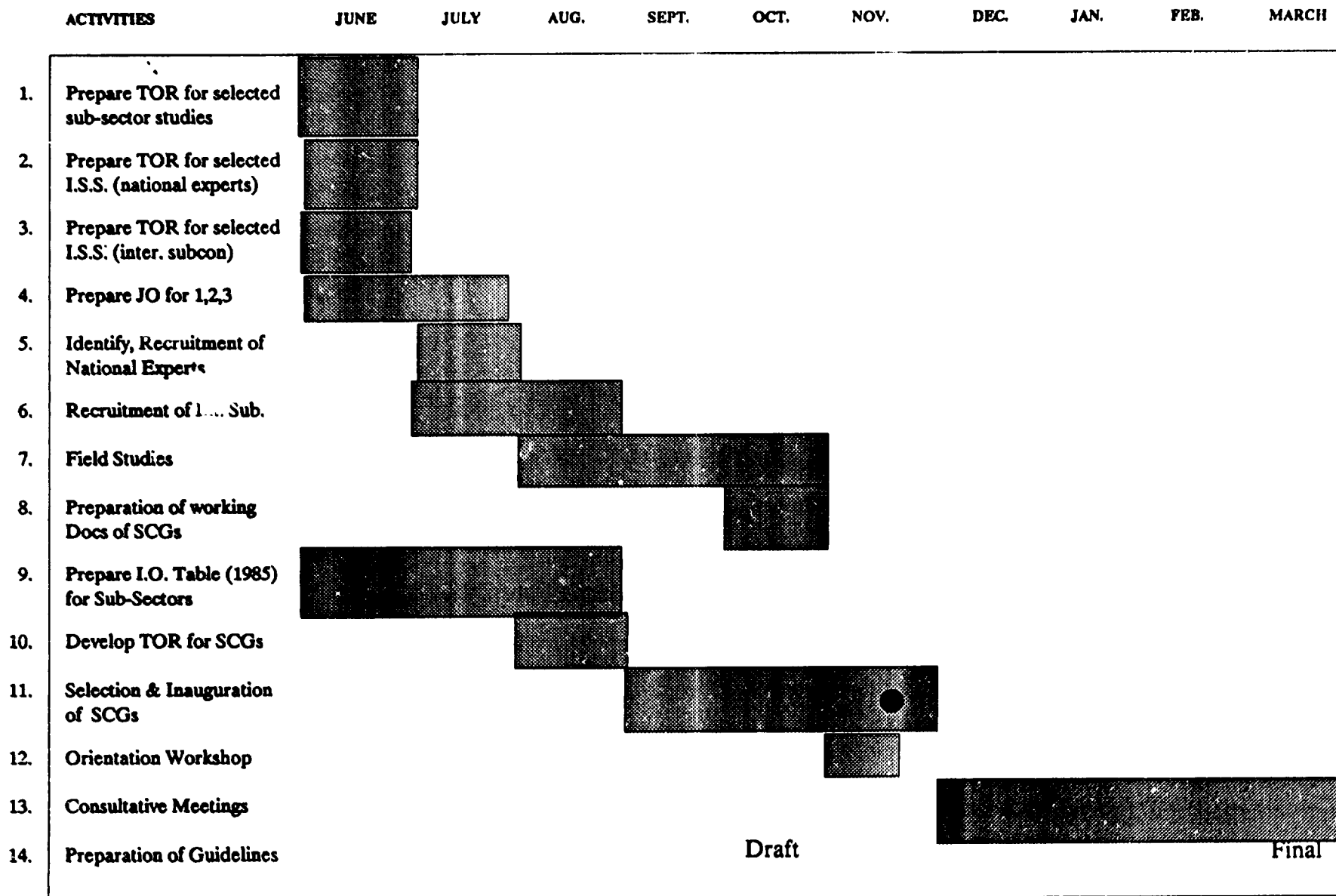
<b><u>Activity</u></b>	<b><u>Executing Agency/Period</u></b>
1. Preparation and discussion of working paper on concept, objectives and strategies for the IMP.	PAD January-march 1990
2. Technical support activities	
(a) Data collection and analysis	PAD/MSG
(i) Determination and collation of data	(continuous)
(ii) Preliminary data analysis	
(iii) Development of Data Base for the sub-systems	PAD/MSG/UNIDO National Experts
(iv) Organisation of information, reports catalogue and arrangement for storage and retrieval systems	PAD/MSG/UNIDO (National Experts)
(b) Selection of Sub-systems	
(i) Criteria for selection of sub-systems	PAD/MSG March-May
(ii) Selection of sub-systems	Mid-May
(c) Sub-sector Studies	
(i) Preparation of Objectives and TOR for relevant sub-sector studies	PAD/MSG/UNIDO April-June

- (ii) Preparation of job description and recruitment of national experts/consultants      PAD/MSG/UNIDO  
May-June
- 'iii) Preparation of job description and recruitment of international sub-contractors      PAD/MSG/UNIDO  
May/Mid-June
- (d) Preparation of I.O. Table (1985)      PAD/MSG/UNIDO  
March/Mid-June
- (e) Preparation of Working Documents for SCGs      Mid August-Mid November
- (f) Study Tour      MSG/UNIDO  
Mid Nov-Mid December
- 3. Strategic Consultative Group
  - (a) TOR and operational framework of SCGs      Mid Sept-Mid November
  - (b) Selection and inauguration of SCGs + one day seminar      MSG  
Mid-October
  - (c) Study of background paper on sub-systems      PAD/MSG/UNIDO  
Mid Oct-Mid November
- 4. Preparation of guidelines for the IMP      MSG  
Mid Feb-Mid March 1991

**N.B. :**

PAD - Policy Analysis Department

MSG - Management Support Group



ANNEX 1A

POLICY ANALYSIS DEPARTMENT,  
FEDERAL MINISTRY OF INDUSTRIES,  
IBADAN.

INDUSTRIAL MASTER PLAN  
FOR  
NIGERIA:

CONCEPT, OBJECTIVES AND STRATEGIES

BY

ODE OJOWU

A WORKING PAPER  
FEBRUARY, 1990.

**INDUSTRIAL MASTER PLAN FOR NIGERIA:  
CONCEPT, OBJECTIVES AND STRATEGIES**

**BY**

**ODE OJOMU**

**1. BACKGROUND:**

The economic crisis, which was formally admitted by Government in April, 1982, exposed the fragile base of Nigeria's industrial sector. At independence, the overall economic policy frame into which that of industry fitted, relied heavily on the operation of the market and a high degree of international good-will. But before the end of the civil war, however, it was obvious that Government had lost patience with the international community; and its faith on the efficacy of the market in directing the pace of industrial development in Nigeria had equally waned. Constrained, in part, by the civil war, industrial growth in the 1960's was low. Indigenous participation was equally disappointing. The Nigerian Enterprises Promotion Decree (NEPD) of 1972 (amended 1977), intended to tilt the scale in favour of Nigerian entrepreneurs, failed to stimulate the appropriate response. It was against this background that the Federal Government, assisted by the revenues from the

petroleum sector, decided to take up the slack in investment in the productive sectors of the economy. In addition to investing in the manufacture of consumer goods, the Federal Government in particular, invested in the intermediate and capital goods sub-sectors - iron and steel, pulp and paper, petrochemicals and automobile assembly plants. Between the 1970's and early 1980's therefore, the growth of manufacturing was fairly rapid, averaging some 13% during this period. Manufacturing as a share of GDP was, however, a dismal 6%, with consumer goods accounting for well over 70% of total MVA, and the balance of the MVA of less than 30% accounted for by the intermediate and capital goods. When, therefore, the oil economy collapsed and foreign exchange earning capacity dropped, the fragility of the industrial base was dramatised.

It is generally agreed that the difficulties which Nigeria's industrial sector face today are due to its over dependence on the external sector. As a result of this over dependence, Nigeria's industry is said to be characterized by, among other things,

- (i) the dominance of light consumer goods employing foreign but low level technology for the final processing and packing of consumer goods;
- (ii) heavy dependence on imported inputs - raw materials, intermediate and capital goods, spare parts and technology;
- (iii) low level of inter- and intra-sectoral linkages,



- (iv) a virtual lack of engineering or basic chemical industries to provide the much needed industrial base for a self-sustaining economy;
- (v) absence of industrial diversification and
- (vi) non-competitiveness and in-efficiency.

The net effect of the weak industrial base in Nigeria is that the country has been denied the potential benefits associated with industrial development - employment and the associated structural shifts, inter- and intra-sectoral stimulation through the linkage effects and the ultimate enhanced material well-being of the populace. In addition, the inability of the domestic industrial sector to respond effectively to external shocks, largely because of its non-diversified base, puts the economy in a weak bargaining position, as well as prevents it from taking due advantages of developments in the external sector.

The critical problem facing the country is, therefore, to the formulation of an industrial policy that is capable of re-dressing the ugly trend in our industrial development since independence.

## 2. THE CONCEPT OF AN INDUSTRIAL MASTER PLAN (IMP)

One major weakness of previous industrial and indeed overall development plans, was that projects were planned, sectoral policies were articulated and incentives were put in place without adequate care regarding the effect of one project on another, or the disincentive effects of an incentive policy for activities that are not covered by the

particular incentive structure etc. In addition, policies and programmes - due to political instability and/or political expediency - were subject to rapid changes. Worse still, many of the policies and programmes of Government were put in place under a near total ignorance of the facts and figures on the Nigerian economy.

The macro-economic implications of the above situation are rather too obvious to warrant much elaboration. We only need to note the off-setting tendencies of inconsistent policies and incentive on the economy as a whole.

An industrial master plan seeks to minimize the problems of policy, and programme inconsistencies in the development of a nation's industry. This, the IMP seeks to achieve through a systematic policy articulation that clearly spells out the inter- and intra-sectoral relationships within industry and between industry and other sectors of the economy including, of course, the external sector. It also seeks to modernise and rationalise existing industries in order to enhance their efficiency and competitiveness as well as set up the institutional framework for the strategic management of the industrial sector. Conceptually therefore, the IMP is similar to building a dynamic general equilibrium model to facilitate a clearer grasp of the inter-sectoral resource flows and their implications.

According to UNIDO (UNIDO: 1985: 3), three philosophical assumptions guide industrial development policies, namely:

- (a) The market-rationale assumption
- (b) The State-rationale assumption and
- (c) The Plan-rationale assumption.

UNIDO states that countries that adopt the market-rational approach to industrial development, do so under the premise that the market is a rational allocator capable of stimulating innovative investment decisions thereby rendering it unnecessary "to have any explicit industrial development planning". The role of the state is to put in place a framework that ensures the free operation of the market mechanism.

The state-rationale assumption on the other hand rests on the premise "that decision made by the state are always rational". Industrial development policies and decisions regarding projects, location, resource flows, timing etc. are the pre-rogatives of the state. In the so-called centrally planned economies, therefore, the market mechanism is largely supplanted by the planning mechanism.

Although these two extreme positions rarely coincide with actual practice, UNIDO cites America as typifying the market rationale assumption.

"Under the plan-rationale assumption, which is subscribed [to] by Japan and many other newly industrialised countries, the premise is that while competitive market mechanism is indispensable, rational planning is fundamentally important in achieving industrial objectives... rational development objectives are first searched and identified and then necessary resources and policies including government incentives are directed toward the objectives in accordance with a goal-oriented strategy, while the inter-play of market forces are fully taken into consideration" (UNIDO, 1985: 3).

It does seem that the logic of an industrial master plan can only be guided by the plan-rationale assumption. An IMP is based on the realization that while a policy of laissez - faire can indeed stimulate private initiative, this form of enabling environment may not by itself stimulate investment in the amount and direction that can lead to the full realization of the set socio-economic objectives of the society. In other words, market forces cannot by themselves dictate the objectives of the society; but with state objectives clearly identified and articulated in a plan, the market mechanism can become a veritable instrument in the achievement of such objectives through the adoption of appropriate policy incentive packages and administrative guidance. It has also become obvious that the suppression of the objective market forces or the

indiscriminate involvement and/or intervention of Governments in the economy have not produced better results. Surely, the market cannot but exert its own independent pressure. The manipulation and moderation of this pressure in ways that guide the economy effectively and efficiently to the desired direction is a major task of the IMP.

In short, an IMP can be described as a frame which provides for a dynamic and a regulated flow of investment funds and therefore a regulated industrial development in an environment of de-regulation. The regulation is exercised through a system of industrial incentives and institutional support which then allow domestic and foreign entrepreneurs to invest and operate in areas that they calculate will maximise their returns. A careful and sustained monitoring of the responses of the private entrepreneurs and the associated resource flows, to policy signals, in turn enables Government to adjust the incentive structure and institutional frame in an effective manner. In a way, therefore, the IMP is an attempt to promote medium- to long-term investment through the provision of clear, articulate and negotiated industrial policy. The negotiation is undertaken through organised consultations between the private and public sectors in the course of the plan formulation and its implementation.

In Nigeria, the introduction of SAP with its outward manifestations biased in favour of the market, in practice appears to be more in line with the plan-rationale

assumption. The privatisation, commercialisation and the general de-regulatory policy frame of SAP under the wider umbrella of a 3-year Rolling Plan and preparations for a Perspective Plan all attest to the adoption of a plan-rational assumption. In fact, the new industrial policy of Nigeria, while recognising the key role of the market mechanism, still makes special provisions not only for small-and medium-scale industries, but also provides for a structured package of incentives to reflect the peculiarities of, and priorities attached to various sub-sectors of the industry. As UNIDO aptly notes, "The role of the plan is not to have detailed investment programmes like in the centrally planned economies in terms of investment project, timing and location [or to leave industrial development to the spontaneous operation of the market forces], but to inspire the private sector by indicating the strategic direction the industry should take and inducing potential investors toward such direction through administrative guidance and incentives". (UNIDO, 1985: 4).

We only need to note the difficulties currently experienced with the "take it" package of industrial incentives to appreciate the key role of private-public sector consultations in effective policy formulation and execution.

### 3. OBJECTIVES OF THE INDUSTRIAL MASTER PLAN

The key objectives of the industrial master plan can be summarized as:

- (i) the achievement of an orderly and coordinated industrial development;
- (ii) providing a stable environment and a negotiated incentive structure necessary for medium- to long-term investment by the private sector
- (iii) the domestication of the industrial process through the promotion of local sourcing of industrial raw materials and the development of domestic technological capability;
- (iv) the enhancement of economic efficiency so as to improve Nigeria's international competitiveness in the export of manufactured goods thereby increase the country's export earning capacity and reducing the burden of debt;
- (v) the full development and exploitation of Nigeria's potentially large domestic market;
- (vi) the provision of a flexible industrial base capable of quick but non-disruptive adjustments to national and international shocks;
- (vii) the diversification and restructuring of the industrial base - diversification strengthens the economy by providing a cushion for shocks i.e. slacks in some economic activities are offset by positive developments in other areas, while restructuring seeks in particular to correct the imbalance between investments in consumer and capital goods production; and
- (viii) the maximization of the benefits of industrial development through well designed inter-sectoral linkages; the benefits being, in particular, employment, output, material welfare and some degree of national prestige.

Over the short term, therefore, the IMP seeks to correct the short-comings of the structure of industry and identify problems which must be resolved over the medium and long-term periods so that the long-term objectives are attainable. Industrial priorities and the sequence of industrial development are also

specified over this period. For example, the over dependence on imported raw materials and poor infrastructures are short-term problems. In the medium to long-term periods, depending on the resolution of the short-term problems, effective domestication of industrial structure will be pursued, e.g. domestication of technology and industrial skills and the realization of the full benefits of industrial development, guided by the vision of industrial development already specified in the short-term.

#### 4. STRATEGIES FOR THE PREPARATION AND IMPLEMENTATION OF THE INDUSTRIAL MASTER-PLAN

In outlining the strategics for the preparation and implementation of the IMP, it is pertinent to sound an early note of warning that the focus on the private sector as the moving force in industrial development, and the implied decrease in the role of Government in directly productive investment, increases rather than diminish the role of the Government in the management of the economy. It will require enhanced public sector professional and technical skills as well developed institutional and political frameworks. For, those who must manage cannot be less qualified and less competent than those to be managed. To be partners in progress the public and private sector operators must be equal partners in knowledge and skills.

In the preparation of the IMP, there must be a blend of politics, business and technical work. Government in cooperation with the private sector will set the targets and priorities that will guide the technical work, and the target setting must, in part, be guided by data and



information generated and analysed by technicians. And both Government and technical experts must be in constant inter-action with the business sector - the target beneficiary of the IMP.

The implementation of the IMP involves three main phases. (Richard F., 1989: 1). The first phase involves the "formulation of the strategic guidelines for the IMP and the setting up of the institutional framework for the strategic management of the industrial sector. Phase two involves the formulation of strategic investment and action programmes for industrial development, while phase three is to implement and monitor the investment and action programmes.

In simple language, the three interrelated phases imply first identifying and analyzing the problem of the industrial sector. Based on the analysis of the problems identified, design the appropriate investment strategies with given levels of investment related to time specific growth targets. In order to ensure that investments are undertaken and targets met, a strategic management and monitoring of the investment programme is put in place. The constant monitoring of the responses of private sector investments to given incentives, provides the guide to appropriate adjustments when necessary.

The preparation of the IMP therefore involves the following steps:

(i) Data Collection:

the collection, collation and analysis of existing data on the Nigerian economy. This exercise is to provide a guide for the selection of priority sub-sectors for an indepth study.

(ii) Choice of Priority Sub-Sectors:

the analysis of existing data will help in the choice of priority sub-sectors as measured in general by the sub-sector's potential for employment generation, competitiveness, linkage effects etc. In the choice of priority sectors due emphasis must also be placed on the distinction between domestic resource based industries (DRBIs) and foreign resource based industries (FRBIs) so as to maximise both the linkage effects and the enhancement of the adoption of foreign technology.

In the case of Malaysia, UNIDO found that a broad based definition of a priority industry carried with it certain defects, viz,

- (a) the difficulty of identifying an industry as having priority over others because industries inter-relate with each other and have linkages with other sectors of the economy.
- (b) a priority ranking of industries may lead to excessive resource flow to the prioritized industry to the neglect of others thus creating undesirable distortion of the industrial sector and
- (c) because a given industry contains a wide range of products from simple to sophisticated and competitive to non-competitive, a blanket priority ranking of an industry may end up protecting already competitive products or those with "dubious prospects for comparative advantage" (UNIDO, 1985: 25).

The way out of the problem is to identify priority products and product groups within industries instead of a priority industry. The criteria for product selection include potentials for comparative advantage, applied in a dynamic rather than static context, existing products considered essential for national economy, "but currently suffering from inefficiency and noncompetitiveness... and those to be promoted as export-oriented products". (UNIDO, 1985: 26). In respect of Nigeria, we need to add other criteria such as products with great potentials for use of

local raw materials and those products with potential for rapid diffusion of technological knowledge. In general priority ranking of a product or product group must be related to one or two of the industrial development goals.

It is obvious, however, that the choice of products or product groups for priority attention must be based on an indepth sub-sectoral studies of the industrial sector.

**(iii) In-Depth Study of Sub-Sectors**

The in-depth study of priority sub-sectors will form the pivotal point in the preparation of the IMP. These sub-sectoral studies adopting the format already perfected by the PAD in its sub-sectoral studies will examine the current status of industries in each sub-sector, identify factors affecting the development of each of the sub-sectors, establish common patterns, determine market potential and develop appropriate models to predict future trends (see for example PAD 1989 and UNIDO 1985: 24). The sub-sectoral studies will also provide the relevant information necessary for the assessment, or determination of the market inclinations of various products or product groups. (see UNIDO. 1985: 28), as regards their export or domestic market potentials. In other words, though public focus stresses the need for the export of DRBIs rather than the products of FRBIs, a detailed analysis examining in particular comparative advantages elasticities and market size for products will guide the "strategic development directions". A critical analysis of export incentives on non-traded goods and import-substitute ventures will be critical in harmonizing the incentive structure. (For an example of Shift Analysis, see Okoye, 1989).

**(iv) Providing a Macro-Framework**

The sub-sectoral studies will provide the input into the Macro-Framework. The macro-economic framework, employing given sub-sectoral targets, will enable projections of GDP and sectoral contributions to the GDP, the investment requirements etc. Any changes in sectoral targets growth rates which are fed into the model can be simulated to assess the resulting changes in industrial growth. In other words, the macro-model can, under alternative scenarios, be simulated to determine the desired path of industrial development or to make alterations to initial plans (see Owosekun and Cleron, 1989). Such simulations will also allow for comparisons on export/domestic market potentials of DRBIs and FRBIs. (UNIDO 1985: 20).

(v) Investment Requirements

The volume and pattern of investments necessary for the successful implementation of the IMP is specified for each sub-system with clear targets set not only for each of the sub-systems, but clearly reconciled with the overall aggregate targets set for the economy. In other words, investments and their related short and long term targets which are set in one sub-system must dovetail into other sub-systems for a co-ordinated industrial system in which the overall objectives can be effectively achieved.

(vi) Infrastructural Support

Suppose an instantaneous improvement in energy supply, regular flow of clean water, for home and industry, reliable telephone system and a speedy delivery of mails. These improvements, will mean that large sums of foreign exchange used for purchase and maintenance of stand-by generators will be released, investments in bore-holes and heavy over head tanks will stop and unnecessary costly business travels by executives and their subordinates will be reduced. The net effect will be to free large sums of funds for capital investment, reduce the overhead costs of production with a consequent lowering of product prices. In other words, an improved infrastructural support for industry will enhance the efficiency and competitiveness of the sector.

A sustainable growth and development of industry must therefore have as its major input, a reliable infrastructural support. The sub-sectoral studies must include the examination of the infrastructural requirements for each sub-sector. Sub-sectoral growth targets calculated in the sub-sectoral studies must determine and state the minimum required level, by types, of infrastructural support necessary for the realization of target growth rates. An explicit consideration of the role of infrastructure in industrial development through the IMP will perhaps force policy to focus on sustainable rather than rapid growth.

Perhaps the special role of information flow as part of the infrastructural support should be mentioned. With the focus on the private sector under the IMP, timely and accurate flow of information is vital in order that the uncertainties in the business environment will be reduced to calculable risks and their associated returns. Uncertainties resulting not only from policy inconsistencies, but also from distorted and delayed information flows can encourage sharp business practices which in turn breeds mutual suspicions between policy makers and private sector operators.

(vii) Institutional Support:

Many of the existing institutions are in line with the requirements for the preparation and implementation of the IMP. These include NCID, IDCC, RMRDC, SON IIPC etc. at the policy level and MAN, NASSI, NACCIMA, Bankers Committee and all relevant private sector organizations both large and small at the private sector level. The flow of information between these bodies and regular interaction will promote the spirit of consultation and cooperation between them. The IMP should be the product of all the actors concerned with industrialization in the country rather than a document of Government for the private sector to accept or reject. The involvement of the Strategic Consultative Groups (SCG) is to ensure the effective participation of the private sector in the preparation and implementation of the IMP.

(viii) Finance:

An orderly development of the industrial sector will require an orderly flow of the needed finances. The priority attention to be paid to a sub-sector or products/product groups, will also need priority flow of resources. Industries cannot take full advantage of fiscal incentives from Government if their investment requirements cannot be financed or if fiscal incentives are more than off-set by interest rate disincentives. In the normal functioning of an economy it is expected, for example, that changes in capacity utilization in industry will exert some influence on the interest rates. A decline in capacity utilization will, ceteris paribus, exert a downward pressure on interest rates; while increases in capacity utilization or net additions to existing capacity are likely to exert an upward pressure on interest rates. Our experience since SAP, during which period banks have grown in number from 45 in 1985 to about 90 in 1989, has shown the rather non-correlated growth between the financial system and the industrial sector. Interest rates are in double digits just as industrial capacity shrinks to very low levels. The relationship between industry and the financial system must be studied and streamlined if the dreams of the industrial master plan are to be realized.

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CRITERIA FOR THE IDENTIFICATION OF  
INDUSTRIAL SUB-SYSTEMS FOR THE  
INDUSTRIAL MASTER PLAN

BY

ODE OJOWU

A WORKING PAPER  
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**CRITERIA FOR THE IDENTIFICATION OF  
INDUSTRIAL SUB-SYSTEMS FOR THE INDUSTRIAL MASTER PLAN**

**INTRODUCTION:** A key strategy of the Industrial Master Plan (IMP) is the provision of a framework that allows for a dynamic and regulated flow of investment funds into areas of industrial production that have been designated priority areas; the objective of which is to achieve an orderly and coordinated industrial development for Nigeria. As UNIDO aptly notes,

"The role of the plan is not to have detailed investment programmes like in centrally planned economies, in terms of investment project, timing and location, but to inspire the private sector by indicating the strategic direction the industry should take and inducing potential investors toward such direction through administrative guidance and incentives". (Cited in Djowu, O: 1990:9 Emphasis added)

One way by which the strategic direction in industry is indicated is through the choice of priority sub-systems with their associated policy requirements. A sub-system's approach to industrial policy strategy, in the ultimate, takes due cognisance of differences in the developmental needs and operational requirements of various industries and therefore seeks to design policies to meet the requirements of each sub-system, but mindful of the overall systems context into which each of the sub-systems fit.



## II CONCEPT OF A SUB-SYSTEM.

Conventionally, a modern economy is divided into three broad sectors: agriculture (primary production), industry (secondary production) and services (tertiary production). For the purposes of, perhaps, isolating either a problem, or a potential for analysis and policy focus, each of the sectors can be further sub-divided into sub-sectors. In the case of the industrial sector, for example, beverages or automobile manufacture can be identified as sub-sectors of the industrial sector. A sub-sector is, therefore, a functional sub-division of a sector based on the principal production activity of such a sub-sector.

A sub-system, on the other hand, is an industrial net work which may include one or several industrial sub-sectors, that is organised either around a technology, a resource or a market, for example. The concept of a sub-system is, therefore, a relational rather than a functional one. For example, a sub-system organised around the resources, oil and gas, will include not only the industrial sub-sector concerned with oil and gas extraction, but also refining, upstream and downstream petrochemicals (including fertilizers) and even the distribution of petroleum products. In other words, a sub-system groups together a number of industries with characteristics similar enough (e.g. resource or technological requirements) to allow for a certain degree of commonality in the way a given policy or incentive affects the group or the sub-system.

Sub-systems may also be related to one another. For example, the agro-allied sub-system consisting of textile, food processing and rubber products industries, can be related to the chemical and

petro-chemical sub-system through the fertilizer and insecticide requirements for primary agricultural production, or even directly through chemical additives needed for food preservation or chemicals needed for textile production. We can also cite the pervading relationship between the equipment and engineering products sub-system and all other industries in the economy. In this way the sub-systems create linking "bridges" to one another to form an industrial system as a sector within the economy.

### III CRITERIA FOR CHOICE OF SUB-SYSTEMS

The criteria for the choice of sub-system for the IMP must have as their reference point the overall socio-economic objectives of the Nation. The macro objectives as articulated in the Structural Adjustment Programme include, inter - alia,

the restructuring and diversification of the productive base of the economy, the achievement of fiscal and balance of payments viability over the medium-term period, laying the foundation for a sustainable, non-inflationary or minimal-inflationary growth and the lessening of the dominance of public sector in productive investment in favour of an enhanced private sector role.

Accordingly, Government is expected to shift emphasis from direct productive investment to promoting an enabling environment and other incentives to the private sector so as to intensify the growth potentials of the private sector. The industrial sector is, no doubt, pivotal to the achievement of the socio-economic objectives of the country. However, it must be noted that the achievement of the overall socio-economic objectives of the society will need to pool resources far beyond the resources that can be available to the industrial sector.

While, therefore, the industrial sector must contribute significantly to the achievement of the macro-objectives, it must, from the operational view point of the IMP, do so with particular reference to the socio-economic objectives as outlined in the Nation's industrial policy. This "narrow" focus will permit the industry to utilise its resources more effectively and prevent the sector from attempting to do too much only to achieve very little.

The specific objectives of the industrial policy from which the criteria for the selection of sub-systems must emanate include:

- a. provision of greater employment opportunities
- b. increased export of manufactured goods
- c. dispersal of industries
- d. improvement of domestic technological skills
- e. increased local content of industrial output
- f. increased private sector participation in the manufacturing sector. (See FMI: Industrial Policy of Nigeria p.12)

These objectives are not new, but the failure to achieve them in the past was blamed largely on an inarticulate industrial policy, the structure of industry that relied heavily on foreign inputs, near absence of public - private sector interface and poor management strategies.

To achieve the above objectives therefore, the following criteria must guide the choice of industrial sub-systems for the IMP:

1. Linkage Potentials. In order to domesticate the industrial base, industries must display the potential for back-ward and forward linkages with the rest of the economy. Such linkage effects will in fact promote other

objectives of industrial policies such as increased employment opportunities and economic diversification.

2. Self-Sufficiency and Domestic Raw Material Sourcing

Potentials Sub-systems that promote the use of local primary raw materials will not only increase the well being of primary raw material producers but also enhance the industrial capability of the country through the encouragement of local processing of industrial inputs. It will also help to develop the self-sufficiency capability through, in particular, the increase in MVA. Local sourcing of raw materials will contribute to the development of the domestic market as well as reduce the central and disruptive role of foreign exchange in our industrial development.

3. Domestic Resource Based Industries (DRBIs) vs Foreign Resource Based Industries (FRBIs) and their Market

Potentials/Orientation. Although the policy emphasis is on the development of DRBIs it is not automatically true that DRBIs will be more competitive than the FRBIs. A lot will depend on such variables as elasticity measures, growth potentials, market size and competition. The development of DRBIs must be carefully balanced by the appropriate choice of FRBIs so as to tap the full benefits of export promotion through both the DRBIs and FRBIs as well as the promotion of technological development and adaptation. Some sub-systems which may be DRBIs FRBIs, have double or composite orientation in their products range. A careful delineation of these potentials in an investment action programme will be critical in tapping the full advantages of foreign technology and local possibilities.

4. Potential for Competitiveness and New Product Creation

The ultimate importance and, therefore, the priority attached to an industry or a sub-system, derives from what it produces or has the potential to produce. We note also that even within an industry or a sub-system, cost structures and market orientations will vary among products. The operational basis for the development and promotion of a sub-system will go beyond a blanket focus on the whole sub-system. For each sub-system identified as priority, the products or product groups that actually give the sub-system a priority ranking must be clearly known. The product or product groups will be examined for their comparative advantage, focusing attention on the dynamic rather than static comparative advantage; those products/product groups more suitable to domestic market will also be identified. In addition, the sub-system's potentials for creating new products over time will be an additional criterion for selection. New product creation carries the clear advantage, either for domestic or international markets, of giving an industry a lead role in the market for the product(s) so created. A focus on products and product groups also carries the added advantage in the sequencing of investment action programmes regarding products that need immediate development and those that need to be developed in the medium to-long-term periods. The focus on products and product groups carries the policy advantage of assisting in constructing an effective tariff structure for the country.

A sub-system that has the potential for product diversification and capability for rapid expansion, likely to take advantage of the economies of scale, will contribute significantly to the macro objectives of enhanced employment opportunities and stable growth with minimal inflationary pressures.

This group of industries could be new ones or they could be existing industries in need of rationalization and modernization in order to achieve their potential, or they could be both groups. Below is a schematic illustration of a list of major priority product groups for industries in a sub-system and their potentials and developmental requirements.

**INDICATIVE PRIORITY PRODUCT GROUPS  
FOR DEVELOPMENT, MARKET ORIENTATION,  
RATIONALIZATION/MODERNIZATION**

SUB-SYSTEM A

Industry For Development	Major Products for Development	Major Products for:		Major Sub-Sector for Rationali- zation/ Modernization
		Export Market	Domestic Market	
Industry	p1,p2,p3,p4,p5,p6	p1,p4,p5,p8	p2,p3,p4,	sub-sector1
1,....	.....pn	etc	p6, p9	sub-sector3
2,....		etc		sub-sector6
3,.....				etc.
4,.....				
5,.....				

p = product.

Adapted from UNIDO (1985:27)

5. Industrial Dispersal & Employment Potentials

A network of industries requiring relatively small capital investment, minimum infrastructural support and labour-intensive in operations should be designated priority industries. Because such industries will be relatively easy to set up in any part of the country, they will help to spread the material benefits of industrialization. Their labour-intensiveness will promote the diffusion of industrial skills throughout the country, and contribute to the reduction of unemployment. More importantly, these industries will be a boon to rural development and help to stem rural - urban drift.

6. Technology Promotion Potential The ability to create, innovate and adapt techniques of production are crucial to sustaining the tempo of industrialization. Technology, defined as the knowledge to design, create, adapt and even manipulate the industrial environment, is the key input to industrialization. We must understand, in our search to develop technology, that a machine is not technology - it is the product of technology. The manipulation of a machine is not technology - it is a technical skill. A technician must be able to understand how an equipment operates, must be able to service and generally maintain the equipment and keep it in a working condition. Technological skills must involve the ability to design and fabricate machines and equipment, or create new ideas that will lead to the design of new machines to solve problems that are unique to our industrial landscape, e.g. the development of labour - augmenting rather labour-displacing technology as a conscious policy under the I.M.P. Industries that have the potential for technological

development should be designated priority industries under the I.M.P.

7. Strategic Industries In Need of Development, Modernization and/or Rationalization A network of industries strategic to industrial take off, especially in basic engineering and equipment and in chemical and petrochemical areas need to be designated as priority industries for development. Such industries are expected to fabricate/manufacture basic capital equipment, tools, spare parts and components. If they are already in existence and are performing poorly, due to faulty policy articulation or structure of ownership etc, they should be modernized and/or rationalized so as to provide the needed impetus to industrial take-off.

8.1 BASIC INFRASTRUCTURES. We note that basic infrastructures on which industrial performance depends operate outside the authority of the Federal Ministry of Industries. Such infrastructures as water, energy, transport, communications, finance, each come under a separate authority. For the purposes of preparing and implementing a successful I.M.P., crucial infrastructures should be considered a sub-system and be declared priority areas by the Federal Government so that they be planned and developed along with the other aspects of the I.M.P.

8.2 Human Resources Management

If past and recent experiences in Nigeria's national economic management in general, and modern sector management in particular, are anything to go by, then HUMAN RESOURCES MANAGEMENT should be declared a priority infrastructure for



priority development. Human resources management is perhaps more crucial to the success of the I.M.P. than any other physical infrastructure. For, on it depends even the proper development and maintenance of physical infrastructures. Many laudable socio-economic projects in Nigeria have fallen on the rocks of human encounter as authorities clash in the political, boardroom and management arenas. For a smooth, take - off the I.M.P. a viable "technology" in the development and management of human resources is the absolute key.

Finally, we should note that the criteria set forth are not mutually exclusive. There is logically, a considerable overlap between one criterion and others. Equally to be noted, is the fact that a sub-system may simultaneously possess many of these criteria. Indeed the more of these criteria a given sub-system possesses the higher will be its priority rating.

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**NATIONAL COMMITTEE ON INDUSTRIAL  
DEVELOPMENT**

**ROLE AND FUNCTIONS OF STRATEGIC  
CONSULTATIVE GROUPS (SCG)**

**BY**

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**A WORKING PAPER  
FEBRUARY 1990**

## ROLE AND FUNCTIONS OF STRATEGIC CONSULTATIVE GROUP (SCG)

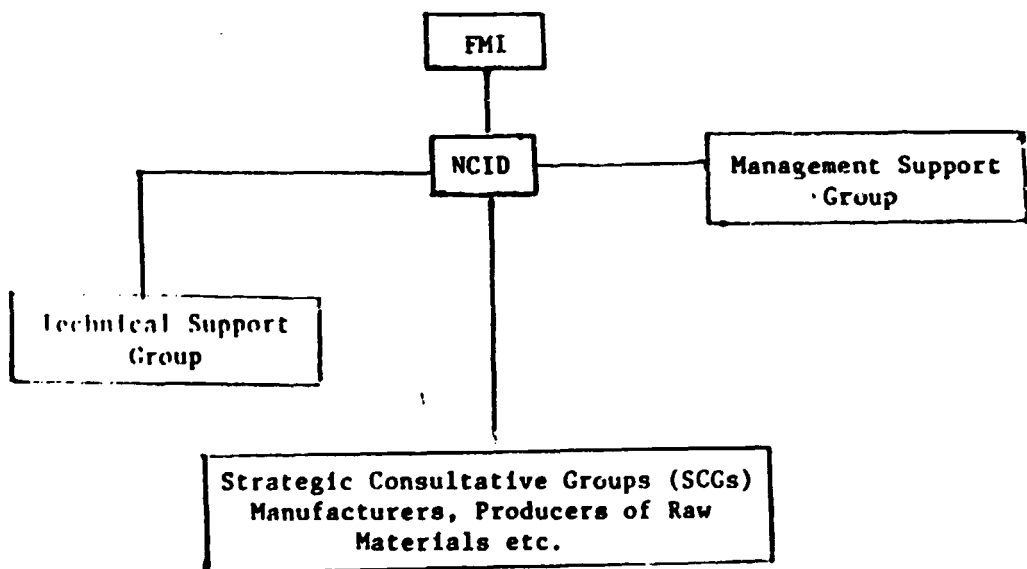
The Industrial Master Plan is the operational document which guides the strategic management of the industrial sector. The main objective of strategic management of the industrialization process is to promote, support and manage, on a continuous basis, the progressive development of a competitive, efficient, dynamic and integrated industrial sector which will contribute to the overall modernization and growth of the country. Countries such as Japan, Korea, Malaysia and Indonesia have adopted this approach and in the last few years, a number of African countries such as Cote d'Ivoire, Guinea, Cameroon have been assisted by UNIDO in introducing and improving strategic management of their respective industrial sectors. This approach is timely as it complements the Structural Adjustment Programme initiated in many developing countries.

The approach is based on a system of consultative mechanism between Government, industrialists and other concerned actors in the formulation, implementation and monitoring of objectives, strategies and action programmes for the progressive and dynamic development of a selected number of industrial sub-systems which present opportunities for an efficient and competitive network of industrial activities. The core of the consultative mechanism is the Strategic Consultative Group (SCG) to which all the major actors that is, manufacturers, suppliers of raw materials/inputs, technology experts, transporters, distributors, consumers, finance houses, labour organisation, public utilities, policy makers and policy executors belong. An SCG is formed for each industrial sub-system.

The responsibility of each SCG is to formulate, implement and monitor decisions with respect to its sub-system. The forum presents all actors from the government, private sector and institutions to discuss, exchange views/opinions, agree on ways and means of developing each sub-system in order to attain desired objectives.

Conclusions emerge through a process of consultation and co-operation. Since the output is their work, acceptance, commitment, dedication and understanding of what is expected of each actor is agreed upon. Mutual confidence and planning is involved hence implementation is easier. All members develop a group interest to ensure their sub-system succeeds. Very soon, these SCGs will be constituted and work begins in earnest.

This is a major departure from past practice where there hardly existed any regular institutional framework for consultation and/or formulation of actions, plans, programmes for the industrial sector. Hitherto the practice was that Government acted and private sector reacted. Consequently, there were frequent inconsistencies, conflicts and misinterpretations of Government action often times resulting in wrong signals to the private sector. It is expected that the coordination and consultative mechanism both within government and in private sector will help attain a unique approach combining partnership with pragmatism to the process of industrial planning and management in Nigeria.



#### FORMATION AND COMPOSITION OF SCGs

The preparation of an Industrial Master Plan consists of series of

actions and activities which have to be systematically considered. These activities vary from phase to phase. The SCG play critical role in every phase of preparation of the IMP.

Phase I of the IMP starts with the segmentation of the industrial sector into industrial sub-systems. Once the sub-systems are selected a Strategic Consultative Group (SCG) is formed for each sub-system. The identification and selection of participants are based on the importance of their roles in the functioning and performance of the sub-system. All the major actors (Manufacturers, Raw Material Supplier, Transporter, Public utilities, Policy Maker/Executor (Local Government, State and Federal), Labour Union, Finance Houses, Labour Organisation, Chambers of Commerce etc.) are appointed as members. The composition of each sub-system must ensure maximum involvement of relevant actors. Quality of representation is also crucial. Representation should be at decision making and operational level or equivalent in order to ensure effective participation, commitment to conclusions and successful implementation.

The SCGs have various functions at different phases of preparing the Industrial Master Plan. Phase I consists of formulation of strategic guidelines for the plan. Phase II - formulation of action programmes and Phase III - mobilization of resources, implementation and monitoring.

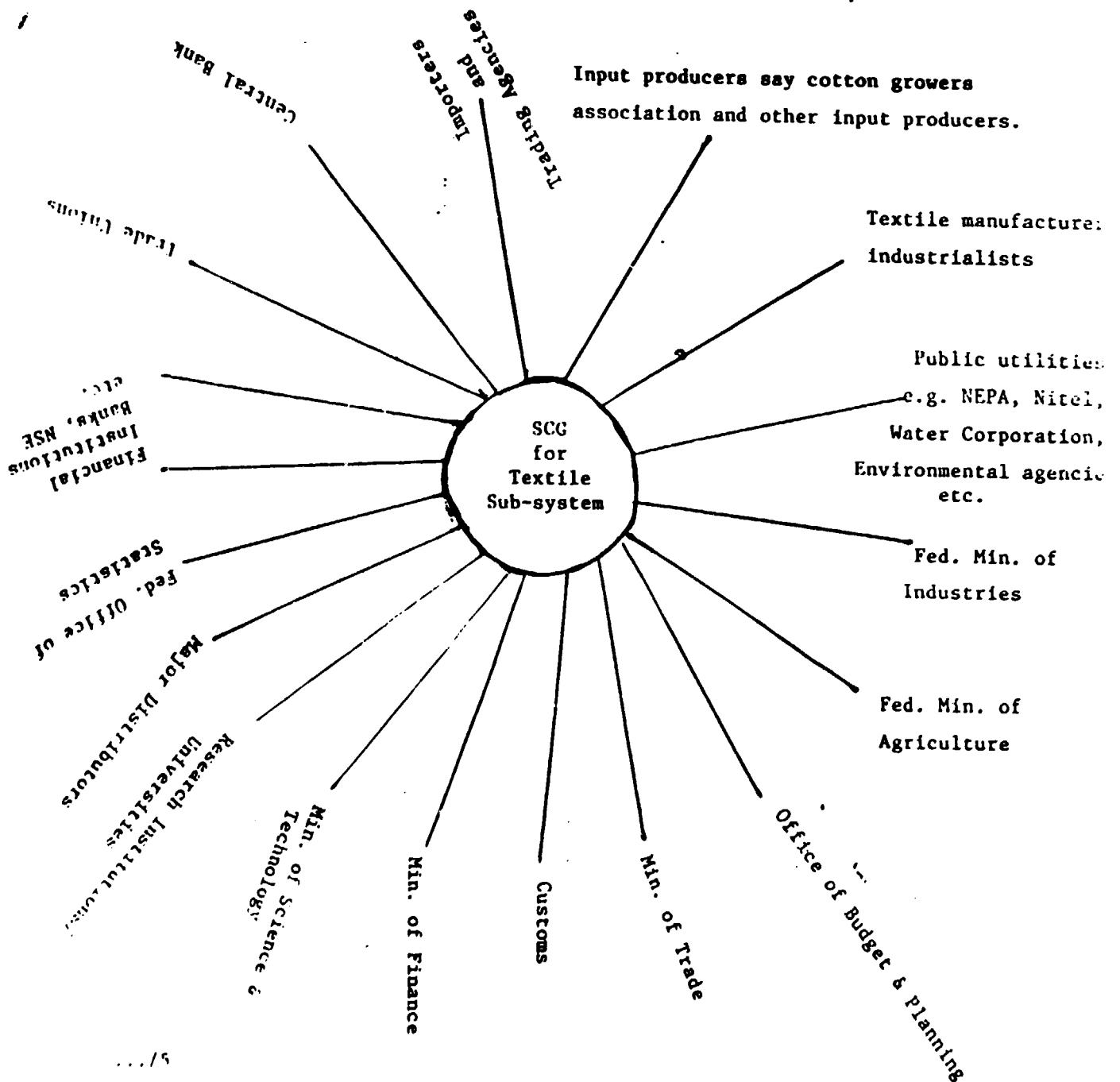
In Phase I, the SCGs are expected to undertake the following activities:-

1. Review the efficiency, competitiveness and performances of each sub-system;
2. Identify the constraints and bottlenecks in the organisation and functioning of each sub-system;
3. Identify capacities required for the development of an efficient competitive sub-system;

4. Examine the role of Government in the sub-systems, that is, regulatory and incentive framework, fiscal regime, the public enterprises, the supporting institutions (training, financial technology, quality control), the physical infrastructure, utilities;

Diagram of composition of a Strategic Consultative Group

e.g. Textiles Sub-system



5. Formulate strategy for progressive development/  
restructuring of the sub-system. This strategy  
will include objectives to be pursued, priorities,  
targets and time sequence with regard to the  
markets to be served, products to be manufactured,  
industrial organization to be promoted, technology  
and acquisition of skills, investment and sources  
of financing etc.
6. Preparation of an integrated report on the strategic  
guideline of the IMP.

This Phase is about to commence. The NCID Secretariat has set in motion the mechanism of action. A work programme is already drawn up and will be discussed later. Work on this Phase is expected to be completed on or before October, 1990.

Phase II: consists of development of action programme to implement strategies.

SCGs activities will revolve around action on:

- coherent set of policies and measures to improve the administrative, regulatory, fiscal and incentive framework. These measures should be consistent with the macro-economic and other sectoral economic policies and programmes of Government.
- set of actions and supporting investments to improve the organization and efficiency of the services required by the industrial activities and to develop the required human, technological and physical capacities.
- identification of industrial investments to be promoted for the establishment of new industrial activities and for the rehabilitation of existing ones.



- an integrated technical and financial assistance programme to support the implementation of action programme and to be presented to donor institutions/ countries.
- determination of roles of various actors and given target dates of completion. Roles can change depending on sub-systems.

**Phase III:** consists of implementation, and monitoring of the strategies and actions programmes including mobilization of resources (Local and Foreign) of the industrial sub-systems.

Under this Phase, the SCGs in co-operation with the Technical Support Unit of the Federal Ministry of Industry will take decisions related to the action programmes, evaluate and map out means of mobilising resources at all levels - within Government, Private Sector and donor countries or multi-national institutions such as World Bank, UNDP, UNIDO etc. The implementation also spells out expected role of each major actor with a view to achieving progressive and dynamic development of the sub-systems.

The above functions illustrate the crucial role of the Strategic Consultative Group in the whole planning process. It is clear that the responsibilities are heavy and time consuming. However, SCGs will be assisted at all times. There will be timely analysis of data provision of information, as well as presentation of alternative scenarios and courses of action. Guidance will be provided to ensure consistency between the choice of sub-systems and IMP and overall perspective plan for the country. There will be national and international consultants to provide local and international expertise and advice for the review of the diagnosis and the finalization of strategies of the key selected industrial sub-systems. Assistance will also be given in the preparation and coordination of all reports.

Everything may not be smooth sailing. There are some people who have strong doubt<sup>about</sup> the Government's commitment to such strategic management approach. There will be conflict of interests, pressure of work, time constraints, financial problems etc. In spite of these conceivable problems, the consultative and coordination mechanism should generate confidence, flexibility and rationale conclusions on issues. This is the model of consultations many bodies and individuals had recommended over time. Individuals, institutions, associations, public officers must be prepared to participate actively in the process of meaningful industrial development of this country. In the final analysis, it is the industrial sector that will be the major beneficiary of the improved consultation and co-operation between Government/Industrialists thereby creating an efficient and competitive industrial environment that will achieve the aims and objectives of national development objectives.

SUMMARY AND CONCLUSIONS:

- a) IMP seeks to formulate a systematic programme of action designed to attain the desired development objectives.
- b) Emphasis is on consultation, co-ordination and co-operation amongst all major actors both within Government and in the private sector, and the approach combines partnership with pragmatism.
- c) Planning and structuring envisages proper coordination of economic policies.
- d) Rational selection of sub-systems.
- e) Selection of Strategic Consultative Groups that would consist of all major actors in each sub-system.
- f) SCGs will formulate the strategic guidelines for the IMP in the first Phase. This is expected to be completed by November for inclusion in the 1991 Budget and Perspective Plan.

- e) Activities of SCCs in the second and third Phases consist of formulation of action programme and implementation and monitoring of the strategies and action programmes of the industrial sub-systems.
- h) Various back-up support activities for effective functioning of the SCCs.

**REFERENCE**

1. Interim Report of the National Workshop on Industrial Strategies/ Master Plan - Abuja, Nigeria, 4th - 8th September, 1989.
2. UNIDO Papers on Assistance to African Countries in the Strategic Management of their industrialization process.

SOO/OWA  
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IIA

STRATEGIC MANAGEMENT OF INDUSTRIAL DEVELOPMENT

CRITERIA FOR IDENTIFYING AND SELECTING INDUSTRIAL SUB SYSTEMS

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At the last meeting of the National Committee on Industrial Development it was decided that industrial sub-systems should be selected from the following sub sectors:

- Engineering (and Metallurgy)
- Chemical and Petrochemicals
- Agro-allied industries
- Construction industries

These areas have the greatest potential for creating the much needed industrial base and internal engines of growth for Nigeria. We can therefore regard them as "priority industrial sectors" from which to choose our sub systems. (P.I.S.)

Our first task will be to identify the range of sub-systems within each p.i.s. The second task will be to select those to focus on as pilot scheme. Experience gained in dealing with the pilot industrial sub-systems (i.s.s.) will be used in drawing up the Guidelines for the rest of the industrial sector.

Characteristic of a sub-system:

1. It is a network of activities that relate one to another around a resource or commodity e.g. cocoa, leather goods, gas etc.
  - around a production process e.g. vehicle assembly
  - around a technology e.g. polymers, electronics
  - around a need e.g. housing
  - around a market e.g. personal (body) care product market

An industrial sub-system may not coincide with an industrial sub-sector because it includes other activities not normally considered in conventional ISIC.

Besides an industrial sub sector may include a wide variety of final products, some competitive and others not so competitive, some using very simple process, while others use sophisticated process - this then leads to a situation where policies designed for one product may not be appropriate for other products in the same sub sector.

In fact experience has shown that it is easier and more manageable to construct sub-systems around single products or process or technology.

Because of past experiences with policies at the macro-level we are looking for that level of activity, where the impact of policies and support activities will tend to be uniform e.g. policies adopted to encourage wheat production may be different from policies needed to encourage local processing of cocoa before exports, although both belong to the Food sub-sector.

2. It is a network of relations that have synergy. In other words, when we come to the stage of forming Strategic Consultative Groups, the actors will immediately have identifiable interests that coincide, and hence the need and willingness to work together.
3. More importantly it must have potential for developing into an efficient and competitive industrial system.

Diagram A illustrate the basic organisation of a sub-system. It must include a network of the industrial enterprises around which the supply, marketing and financing functions revolve; and the supportive infrastructure (training, R & D, standardisation and

quality control, utilities, physical infrastructure such as energy, roads, harbour, water) facilitating production and the penetration of markets for the output.

To identify the possible industrial sub systems within the selected priority sectors, we have to take into consideration:

- the structure of the sectors as it exists now
- the structure as it ought to be (in order to contribute to creating internal engines of growth)
- how those in it are organised now; in other words if there is already in existence "trade groups" acting together, e.g. Battery manufacturers, ALCMAN, Association of Cement Manufacturers etc; this has to be taken into consideration.
- the potential of adding more value to a national resource and therefore impact on GDP via MVA
- the national, sub-regional or international market potentials which may be catered for by the sub-systems.

With the information available to us from F.O.S. and Raw Materials Research and Development Council (RMRDC) we can begin to identify as many potential sub systems within the selected priority sectors as possible.

#### Selection of the Industrial Sub systems

Having identified the potential sub systems we will then select a few as pilot sub system having regard to

- time available to produce a guideline
- resources available for pilot study
- potential for creating awareness and acceptance of the SMID approach

- potential for playing a catalytic role in creating internal engines of growth for Nigeria

By way of emphasis, we need to create these internal engines of growth because that is the only way of ensuring self sustaining growth. Creating internal engines of growth is the real structural adjustment for the industrial sector.

To quote from a recent UNIDO/IDDA publication, internal engines of growth would comprise:(1)

- "(a) The deliberate enlargement and consolidation of domestic markets and their combination, through economic cooperation, into markets capable of accommodating economies of scale....
- (b) The establishment of core industries generally on a multinational basis.....
- (c) The local linkage of core industries with strategic sectors such as agriculture; transport and communications; building and construction; mining; fuel and power; water supply; and the engineering, chemical and metallurgical sectors.....and
- (d) A steady expanding volume and variety of production and use of factor inputs of domestic origin (viz. entrepreneurship; management, procurement, production, marketing, and distribution; R & D, manpower; raw and intermediate materials; equipment, parts, implements and tools; technology; physical infrastructure; institutional infrastructure and services.....)
- (e) The development of a number of critical national capabilities (human and institutional), e.g. for project identification, development, management and construction; for negotiating foreign direct participation; for the mobilization and redeployment of financial resources; for regulating or influencing flows of factor inputs; for sup-



port services for the public and the private indigenous sector; for monitoring the pace and direction of economic growth and of living standards....."

In other words, in order to get the most impact from the pilot industrial sub-systems, we should also bear in mind that they must contribute to self reliant and self-sustaining economic development, so that the achievements of the pilot scheme will become to a large extent the springboard or foundation for the later stages of the work on SMID.

### Studies Needed

What is needed now for the first task of identifying the various sub system in each sub-sector, is a more detailed study showing the range of products, intra-sectoral and inter sectoral linkages, and the products or processes that can be linked together into a sub-system. An I/O table for each sub-sector will be of great assistance in showing existing and potential inter and intra sectoral transactions. Specifically for each identified sector, the following analyses and/or data are required:

- (1) UNIDO/ECA: Report of the Midterm Evaluation of the IDDA pp 8-9

#### Structure of the sub-sector

- number of establishments
- size by various indices
- variety of outputs
- evolution and structure of demand for its products
- competition and competitiveness within the sector  
(including official and unofficial imports)
- determinants of competitiveness
  - . product quality

- . price
- . timeliness of delivery
- . packaging
- market orientation for various products
  - . size and share of domestic market
  - . share of foreign market
  - . constraints on export
  - . prospects and potentials

Cost structure and factors influencing costs.

- Impact of policies on the sector and differential impact on various products. (This should include macro-economic policies, industrial incentives and subsidies).
- Impact of physical infrastructure on the performance of the sector.
- Impact of institutional support (or non support) on the sector.
- Organisations and relationship within the sector
- Identify existing relationships between industrial enterprises in the sector and organisations or enterprises on the supply side as well as distribution side.
- identify other key sectors that affect the sub-sector under study.

### PILOT STUDIES

Since at this stage of the game, we are interested in gaining insight into the problems likely to be encountered in mounting the Strategic Management of Industrial Development, it is suggested that in order to reduce the lead time needed to complete the above diagnosis, we can abstract from each sub sector the poten-

tial sub-systems where we have found that some work has already be done by PAD, RMRDC, or other ministries, and then broaden or contract the scope as may be desired keeping in mind the criteria discussed above.

The following potential sub-system are suggested

**Engineering & Metallurgy**

- Vehicle Assembly plants
- Iron and Steel (Basic Industries)

**Chemical & Petrochemical**

- Rubber and Rubber products
- Petrochemicals
- Pharmaceuticals

**Agro-Allied**

- Vegetable Oils (oils and fats)
- Leather and Leather products (meat?)
- Cocoa
- Textiles

**Construction**

- Non-metallic mineral industries (with emphasis on building materials industries)

In view of the centrality of electric power (generation, transmission and distribution) to industrial development a sub-system around the electric power as a resource and a process technology is suggested.

# BASE DIAGRAM OF

MARKET FOR FACTOR INPUTS

A PRODUCTION SYSTEM

MARKET FOR OUTPUTS

