

**The Manderstam Group has over 60 years'
experience in 90 countries**

In

**Process and Industrial Development
in the Food and Chemicals Industries**

**INTERNATIONAL CONCERNS GOVERNMENTS, NATIONAL
AGENCIES AND INDUSTRY EMPLOY US BECAUSE:**

As independent consultants we identify ourselves unreservedly with the clients interests.

Our approach is professional scientific and unbiased.

Projects are dealt with by a team of competent engineers, technologists and economists.

We are investment conscious and can project the anticipated economics of an enterprise.

We place at the client's disposal the accumulated experience of over 60 years.

The client benefits by our know-how and knowledge of local conditions in more than 90 countries.

We keep ourselves informed of the latest developments and techniques and this knowledge is used exclusively in the interest of the client.

Clients

The following is a representative list of organisations for whom we have carried out work:

International Organisations

Asian Development Bank
Commonwealth Fund for Technical Cooperation
International Bank of Reconstruction and Development (The World Bank)
International Finance Corporation
United Nations
United Nations Industrial Development Organisation (UNIDO)

Abu Dhabi

Government of Abu-Dhabi

Algeria

Department d'Etudes Industrielles et Technologiques, Algiers

Angola

Permanent Commission for Industrial Development
Companhia Industrial e Comercial de Angola

Arab Republic of Egypt

Government of the Arab Republic of Egypt
Al Nasr Company for Sugar and Pulp Industry
Andrew Crookston & Co Ltd.
Bank Misr
Egyptian Salt and Soda Co. Ltd.
Kafr el Zayt Cotton Co.
The Egyptian Cotton General Organisation

Argentina

Alejandro Sonfanti S.A.
Compania Argentina de Pesca
F.I.F.A.C.O.

Bangladesh

Government of the Peoples Republic of Bangladesh - Planning Commission

Belgium

Cockerill-Ougree. Providence et Esperance-Longdoz S.A.
L'Intercommunale du Brabant Wallon (I.B.W.)

Brunei

Government of Brunei

Canada

Arctic Canada Gas Transmission Company
Provincial Engineering Ltd
Victory Mills Ltd

Cyprus

Government of Cyprus

Ethiopia

Ethiopian Petroleum Share Company

Ghana

Government of Ghana

Greece

Ministry of Co-ordination
Centre of Planning and Economic Research
The Phillipou Group

India

Assam Pulp Mills Ltd.
Nagarjuna Fertilizers Ltd.

Indonesia

Ministry of Agriculture
Ministry of Industries
National Indonesian Oil and Gas Co. PERTAMINA
P.T. Krakatau Steel Corporation

Iran

Ali-Dad and Abolbashar Farmanfarmaian
Ministry of Agriculture and Natural Resources

Iraq

Vegetable Oil Extraction Co. S.A

Ireland

National Institute for Physical Planning and Construction Research

Jordan

Government of Jordan

Kenya

East African Industrial Management Board

Lebanon

Lebanon Chemical Co.

Maghreb Countries

Centre d'Etudes Industrielles du Maghreb

Morocco

Ministry of Finance

Maroc Chimie S.A.

Netherlands

Middle East Industrial Development Project Corporation S.A.

Nicaragua

Ultramar Banking Corporation

Nigeria

The Federal Government

Portugal

Companhia Uniao Fabril

Gremio dos Industriais de Oleos Vegetais

Singapore

Hong Thye Tea Ltd

Spain

Compenia Auxiliar para el Comercio y la Industria

Sri Lanka

Government of Sri Lanka

Switzerland

L. De Roll, S.A.

Sudan

National planning Commission

El Sheikh Mustafa El Amin and Sons Ltd

Thailand

Royal Government of Thailand

Tunisia

Société Nationale Tunisienne de Cellulose

Turkey

Koruma Tarim Llaclari A.S.

Uganda

Government of Uganda

United Kingdom

Foreign and Commonwealth Office: Overseas Development
Administration

Scottish Office

The Crown Agents for Overseas Governments and Administrations

Albright and Wilson Ltd

Borax Consolidated Ltd

British Industrial Sand Ltd

Brown & Polson Ltd

Clyde Oil Extraction Co. Ltd

Cove and Kilcreggan Burgh Council

English Electric Computer Ltd

High Polymer and Petro-Chemical Engineering Ltd

Merseyside County Council

National Coal Board

Nutrex Ltd

Nypro (UK) Ltd

Renfrew Borough Council

Shankland/Cox Partnership

Says Foods Ltd

Stanton Stanley Ltd. (Stewarts & Lloyds)

Staveley Chemical Ltd

Teesside County Borough Council

Willmslow Urban District Council

Vietnam

Ministry of Economy

Yugoslavia

FENI-Skopje

Organsko Hemijska Industrija

Project Experience

The following is a representative list of the type of studies and industrial projects which we have carried out. in alphabetical order of country.

Abu Dhabi

Market surveys and feasibility study for the production of asbestos sheets and pipes

Algeria

Development of vegetable oils and fats industry

Angola

Studies for the establishment of a large industrial complex

Arab Republic of Egypt

Manufacture of electrolytic caustic soda and chlorine

Manufacture of hydrochloric acid

Manufacture of bleaching powder

Processing of copper ore

Manufacture of furfural

Manufacture of sulphuric acid

Manufacture of carbonate of soda and caustic soda from natural lake waters

Solvent extraction of cotton seed

Hydrogenation of oils and fats

Manufacture of margarine and shortening

Manufacture of soap

Manufacture of pulp for paper manufacture

Manufacture of pesticides

Utilisation of power from the Aswan High Dam for the manufacture of:

- Iron and steel
- Phosphorus and phosphoric acid
- Dicalcium phosphate and triple superphosphate
- Sodium polyphosphates
- Caustic soda and chlorine
- Ferro-silicon
- Ferro-manganese
- Silicon carbide
- Nitrogenous fertilizers
- Aluminium

Design of new cotton ginneries

The modernisation of the cotton ginning industry

Argentina

Production of fish meal and fish oil
Production of groundnut and sunflower seed oils and their conversion into a wide range of products
Hydrogenation of various paint oils
Manufacture of margarine and shortening
Floating fish factory and utilisation of whale meat
Manufacture of linoleum

Bangladesh

Study to establish the potential for the utilisation of natural gas resources

Belgium

Marketing of steel products
Establishment of a municipal solid waste and sludge incineration plant

Brunei

Manufacture of fertilizers based on the utilisation of natural gas

Canada

Manufacture of sulphuric acid
Solvent extraction of linseed
Storage, handling and flaking of sulphur
Manufacture of urea and ammonium sulphate
The conversion of natural gas to easily transportable liquid fuels

Cyprus

National industrial opportunity survey

Ethiopia

Evaluation of refinery performance
Development of the petroleum refining industry
Evaluation of national distribution network

Ghana

Manufacture of nitrogenous fertilizers based on electrolytic production of hydrogen

Greece

Survey of petroleum refining, petrochemical, and fertilizer industries and their long term, planning on national scale
Planning and reorganisation of the steel industry
Establishment of a new integrated steel production complex
Survey of the lignite mining industry and a feasibility study for the utilisation of lignite for power generation
Manufacture of pulp and paper
Production of cottonseed oil and by products
Market survey of plastics with special reference to PVC and of a range of sodium and chlorine based chemicals

India

Production of cellulose from cotton linters

Pulp and paper manufacture

Establishment of a fertilizer complex

Indonesia

Rehabilitation and expansion of the salt industry

Feasibility study on the development of fertilizer and petrochemical industries from hydrocarbon gases

Study of the handling and shipping of liquid ammonia

Production of nitrogen fertilizers

Detailed feasibility study on the production of a range of petrochemicals from refinery gases in Sumatra

Design and construction of a floating fertilizer complex

Market investigation for polypropylene and propylene based fibres

Design and construction of field gas collection and compression pipeline system

Design of LPG storage and handling facilities

Financial and technical management of design, procurement, erection and start-up of polypropylene plant for resin and fibre outlets

Design, erection and commissioning of de-ethaniser and of propane/propylene splitter

Design and construction of sulphur removal plant

Development and rehabilitation of the steel industry

Establishment of an integrated steel mill

Survey of small holder agriculture and study of the development of export oriented agro-industries

Power generation with waste heat recovery using gas turbines

Iran

Establishment of caustic soda and chlorine production

Development of a pesticide complex

Iraq

Manufacture of synthetic detergents
Solvent extraction for vegetable oil seeds
Hydrogenation of oils and fats
Production of margarine, shortening and vegetable ghee
Soap manufacture
Manufacture of starch

Ireland

Utilisation of peat as a source of power and for production of nitrogen fertilizers
Manufacture of bone meal, glue, gelatine, neatsfoot oil, bone grease, etc.
Tanning of hides and skins
Study for the development of a petroleum refinery

Italy

Development of a petrochemical complex in Sardinia

Jamaica

Study for the development of an export oriented petroleum refinery

Jordan

Recovery of potash and allied products from the Dead Sea
Production of phosphatic fertilizers

Kenya

Hydrogenation of oils and fats
Manufacture of margarine and shortening
Production of pesticides

Lebanon

Manufacture of sulphuric acid and phosphatic fertilizers

Libya

Appraisal of an industrial investment in Libya

Maghreb Countries

Development of chemical industry based on marine and rock salt resources

Mauritius

Manufacture of soap and detergents

Morocco

Manufacture of furfural
Production of animal feedstuffs
Processing of pyrrhotite cinders

Netherlands

Manufacture of glycerine

Nicaragua

Regional study for the production of petrochemicals

Nigeria

Processing of vegetable oil seeds - review of related economic problems in Northern Nigeria
Production of nitrogen and phosphatic fertilizers
Production of pesticides
Pulp and paper production in East Central State

Portugal

Manufacture of crude lubricating and dehydrated castor oils
Manufacture of ricinates
Production of coconut oil and lauryl alcohol
Manufacture of synthetic detergents
Review of the vegetable oil seeds industry and recommendations for its re-organisation on a national scale
Solvent extraction and refining of groundnut oil Production of sulphur dioxide

Singapore

Production of monosodium glutamate and alcohol

Spain

Solvent extraction plant
Manufacture of ammonium sulphate using "off-gas" and fuel oil

Sri Lanka

Manufacture of electrolytic caustic soda and chlorine
Manufacture of sulphuric acid and oleum
Manufacture of ammonium sulphate and compound fertilizers
Production of a range of vegetable oils and animal feeding stuffs
Manufacture of phosphatic fertilizers
Production and marketing of fatty acids, fatty alcohols, glycerine, detergents, alkyd resins, and edible fats

Sudan

Development of food processing industries
Development of wood processing industries
Expansion of vegetable oil processing facilities

Switzerland

Design of chemical plant

Thailand

Development of export oriented industries based on agricultural and mineral resources

Tunisia

Pulp and paper manufacture

Turkey

Manufacture of detergents
Production of crude and edible vegetable oils from cotton seed, sunflower seed, tobacco seed, and manufacture of compounded fats
Manufacture of compound fertilizers
Production and marketing fertilizers
Production and marketing of chlorine and of its derivatives, handling and distribution of liquid chlorine
Production of pesticides

Uganda

Industrial development survey

United Kingdom

Manufacture of lecithin
Production of alcohol from maize
Processing of soya beans for their conversion into protein-containing and other materials
Fat splitting and recovery of glycerine
Generation of hydrogen and low pressure hydrogenation
Production of gluten and reinforcement of bread
Production of starch
Production of petrochemicals from naphtha
Production of caustic soda, chlorine and of their derivatives
Production of toluene and xylene sodium sulphonates
Production of sulphuric acid and oleum
Production of aromatic hydrocarbons based on crude BTX feedstocks
Production of hydrogen by steam reforming of naphtha
Production of caprolactam grade cyclohexane
Production of vinyl chloride and PVC
Production of ammonia, Urea, ammonium nitrate, potassium nitrate, chlorine, vinyl chloride and PVC in an integrated complex
Investigation into the causes of explosion and fire at a petrochemical complex
Advice on process design of natural gas liquefaction plants

United Kingdom (cont.)

Study on pollution impacts of a new steel making and other industrial complex on an industrial axes in the North East England

Establishment of a base-line of pollution in an industrial area in Scotland

Determination of the impact on the environment in several areas in Scotland by construction of oil production platforms

Advice on pollution impact of a chemical plant

Advice on re-organisation of design and engineering services

Vietnam

Development of fertilizer production

Yugoslavia

Production of ferronickel

Environmental impact of proposed refinery