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REPORT ON
THE ARAB REPUBLIC OF EGYPT

by

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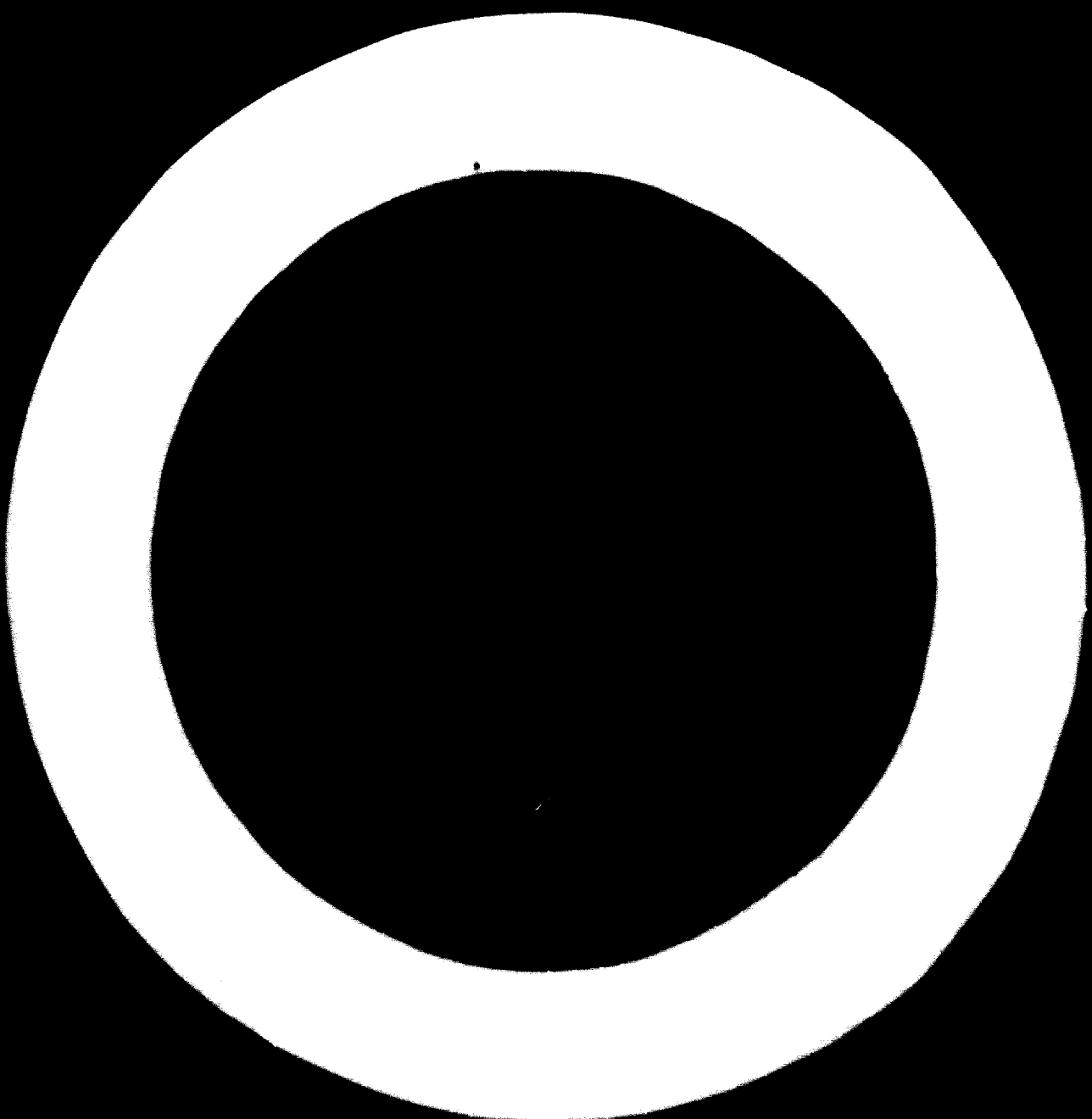
1/ The views and opinions expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO.



1. The Country

1.1. The land and the Nile

The Arab Republic of Egypt is situated in the North Eastern part of Africa. It is borded by the Mediterranean from the North, the Democratic Republic of Sudan from the South, the Libyan Arab Republic from the West, the Red Sea, the Aqaba Gulf and Palestine from the East. The Great River Nile (6650 km) traverses the country from the South across a distance of about 1550 km to the North, linking the Great African Lakes in Kenya, Uganda, the Congo and Ethiopia with the Mediterranean. The average annual discharge of the Nile is about 85 thousand million cubic meters. Thus the country is considered as the Northern Gate of the Continent.

The Suez Canal, across a distance of 162 km., links the Red Sea and the Indian Ocean in the South, with the Mediterranean, the Black Sea and the Atlantic Ocean since 17th November 1869. The Canal was owned by the International Company of the Suez Gulf -- an Egyptian Registered Company - which has been nationalised as from 26 July 1956.

Thus the country is considered as a great central route of World Trade and communication. And in the era of Petroleum, the Suez Canal is the shortest and cheapest leading sea route for transporting the Middle East petroleum to Europe. The country has an area of just over one million square kilometres (386 thousand square miles) about 95% of which is arid desert. The cultivable land around the Nile valley is about 4 million hectars (equivalent to 40 thousand square kilometres, i.e. 4% of the Total area.

From geographical aspect the country is divided into the following main four parts:

First - The Nile Valley and its Delta. The latter being like a triangle with its apex in Cairo and its base on the Mediterranean. The length of eastern leg of the triangle the Damietta Branch in 242 km, that of the western leg, the Rashid Branch is 236 km. The Valley and the Delta between and around the two branches represents the most fertile area of the country, with the exception of the Northern region near the four salty lakes.

From early times the Egyptians tried to regulate the Nile to optimize the utilisation of its water for the irrigation of the land. The greatest and most important deeds in modern times, to serve this purpose, are first the construction of Aswan Dam, and second, the High Dam. Work started on Building Aswan Dam in 1898 and ended in 1902. Its storing capacity was one thousand million cubic metres at 106 metres level.

During the period 1907 to 1912 it was decided to raise its height to reach a storing capacity of 2.5 thousand million cubic metres at 113 metres level.

For the second time, it was heightened to reach a storing capacity of 5 thousand million cubic metres at 120 metres level in 1933. During the period 1954 - 1960 a special hydro-electric power station had been erected to generate some 2000 million kilowatt hour per year, which as from the January 9, 1960 was devoted to feed a great nitrogeneous fertilizer plant in Aswan.

The High Dam had been erected in stages in about 10 years.

On January 9, 1960 President Gamal Abdel Nasser blasted the first quantity of granite, that ushered the start of the hard continuous work needed for its erection.

On May 15, 1964, the first stage of the Dam Construction was concluded, and the Nile was diverted. On July 23, 1970, President Naser declared the termination of that great edifice, by putting into operation the last turbo alternator set in the Dam Power Station.

This power station can generate 10 000 million kilowatt hour per year.

The High Dam had been erected with the technical and economical cooperation of the Soviet Government and People.

Second - The Western Desert representing about 75% of the total area. It is an arid land with the exception of some five oasis, the two southern ones represent the "New Valley" which is endowed with rich subterranean water. In the North-west part of this desert there is the great Qattara depression which is studied for linking it with a canal with the Mediterranean to generate a substantial quantity of hydro-electric power.

In the early sixties rich iron ore deposits have been discovered in El Baharya Oasis, some 350 km. South West of Cairo. A single track railway and a first class road have been constructed linking the new mines with the big industrial centre of Helwan. These mines are the source of good iron ore for the production of some 1.750 million tons of pig iron in the new project under construction of Helwan Iron and Steel Complex. Important oil fields have been discovered in the Western Desert during the sixties and in the early seventies.

Great new discoveries of oil fields are expected to be realized there.

1.2. <u>The People</u>

The population as on mid 1970 was about 33.3 million inhabitants. It is expected to be about 35.0 in mid 1972. In mid 1970, the number of working people amounted to about 8 million employees of both sexes, out of which about 400 thousand in mining, quarrying and manufacturing about 4.4 million were employed in agriculture, about 2$

thousand in electric power, about 387 thousand in construction and the rest in transport and communication, Suez Canal, Trade & Finance, Housing, Public Utilities, etc...

The number of pupils in primary classes numbered about 3.6 million, whilst their teachers numbered about 300 thousand. In preparatory classes (general and technical) about 797 thousand. In secondary classes general and technical 534 thousand. The number of the University students amounted to about 158 thousand in six Universities amongst which are about 23 thousand in Engineering and 6 thousand in Science.

The University graduates amounted to about 23 thousand amongst which are about 3572 in Engineering and 1337 in Science.

1.3. The Economy

At Mid 1970, the picture of the National Economy of 1969/1970 can be summarised in its salient aspects by the following statistical data. Values are in Million Egyptian Pounds (M.L.E.)

One Egyptian Pound = 2.3 U.S. Dollars
Industry includes mining, quarrying and manufacturing according to SIC 1968, Government Public & Private Sectors.
Population : 33.3 Million

		60-61	65-66	66-67	67-68	68-69	69-70
1) Production (at current prices)							
Agriculture	Mill £	582.7	884.0	928.9	950.0	977.7	1075.1
Industry	"	1152.3	1769.2	1835.9	1935.4	2071.9	2252.4
Electricity	"	22.0	41.9	43.5	53.2	54.7	60.4
Construction	"	100.5	197.8	188.1	168.7	231.6	265.6
Transport & Communication	"	146.5	260.5	270.5	180.1	189.9	216.3
Trade & Finance	"	196.0	254.7	273.0	279.0	289.9	307.8
Housing	"	77.5	80.2	83.3	118.6	121.3	124.3
Public Utilities	"	11.3	16.2	16.6	17.3	18.4	19.5
Services	"	396.7	701.8	735.1	815.8	901.9	985.2
Statistical discrepancy	"	-	14.4	-	-	-	-
Total	"	2685.5	4220.7	4374.9	4518.1	4856.6	5306.6

		60-61	65-66	66-67	67-68	68-69	69-70
2) Gross fixed Capital formation (at current prices)							
* Agriculture	Mill £	16.6	30.7	31.3	24.9	25.6	27.0
Irrigation & drinage	"	14.8	32.6	34.4	25.1	32.5	29.1
High Dam	"	6.8	19.0	16.5	12.5	9.5	5.2
Industry	"	67.8	100.6	98.4	85.8	101.1	123.1
Electricity	"	5.6	61.1	69.3	52.9	31.9	27.3
Construction	"	"	6.6	3.9	1.0	2.6	3.4
Transport & communication	"	68.9	49.4	42.6	35.3	67.7	70.2
Suez Canal	"	5.9	3.7	3.5	3.0	1.8	1.2
Trade & Finance	"	"	2.7	2.6	0.7	2.7	3.6
Housing	"	19.1	47.5	42.3	41.7	46.9	36.5
Public utilities	"	7.7	12.4	8.6	4.2	5.8	10.9
Services	"	12.4	17.3	12.4	10.9	15.4	18.0
Total	"	(*)225.6	383.8	365.8	298.0	343.5	359.5

(*) * Excluding the value of lands

3) Industrial Origin of gross domestic income (by factor cost)

		60-61	65-66	66-67	67-68	68-69	69-70
A. At current factor cost							
Agriculture	Mill £	402.7	606.5	612.3	644.4	688.3	771.9
Industry	"	285.6	461.1	477.4	460.3	503.9	542.0
Electricity	"	12.2	24.3	25.2	35.1	35.7	41.8
Construction	"	44.2	94.9	94.3	81.7	110.3	123.7
Transport & Communication	"	102.2	196.6	204.8	115.6	116.3	130.9
Trade & finance	"	145.1	181.5	195.9	205.0	215.9	229.0
Housing	"	73.8	76.1	79.0	113.1	115.6	118.2
Public Utilities	"	6.8	9.2	9.4	9.9	10.8	11.7
Services	"	290.9	457.5	482.1	522.7	542.6	583.6
Statistical discrepancy	"	-	14.4	-	-	-	-
Total	"	1363.5	2124.1	2180.4	2187.8	2339.4	2552.8
B. At Constant prices cost of (64-65)	Mill £	-	2063.3	2069.9	2048.7	2162.9	2312.1
C. Per Capita gross domestic at constant prices of 64-1965	"	52.8	68.1	66.4	65.4	67.3	70.3
4) Employment							
Agriculture	000	3600.0	3877.2	3954.6	3967.4	3964.9	4048.3
Industry	000	625.6	841.7	846.7	866.7	890.7	916.1
Electricity	"	13.1	16.5	18.3	18.5	20.3	22.8
Construction	"	166.0	328.0	307.6	259.8	338.0	387.9
Transport & Communication & Suez Canal	"	252.7	307.8	324.5	327.7	335.7	347.2

Trade & finance	000	663.0	752.5	767.7	785.8	794.3	801.
Housing	"	16.0	21.9	22.6	23.6	135.8	136.
Public Utilities	"	24.3	31.2	31.6	32.3	32.4	33.
Others'	"	1151.2	1427.7	1450.0	1506.9	1539.1	1580.7
Total	"	6511.9	7663.5	7633.6	7686.7	8051.2	8274.7
5) Wages							
Agriculture	Mill £	99.0	197.1	204.9	201.3	210.7	218.4
Industry	"	78.4	154.2	155.2	159.7	166.2	175.7
Electricity	"	3.3	4.9	5.0	4.7	5.9	6.3
Jonstruction	"	27.3	56.0	55.5	47.2	61.7	71.6
Transport & Communication	"	43.3	73.8	75.7	78.5	82.4	85.3
Trade & Finance	"	76.9	106.4	110.5	117.8	121.1	126.7
Housing	"	1.8	1.8	1.9	2.0	10.7	10.7
Public Utilities	"	4.8	7.5	7.7	8.0	8.0	8.3
Others	"	566.5	979.1	1002.2	1024.1	1105.6	1179.7

1.4. The Industrial Sector

1.41 The Industrial Sector in the A.R.E. consists of three sectors namely:
The Government Sector
The Public Sector
& The Private Sector
The Government Sector consists of Workshops and Plants attached to certain ministries.
The Public Sector consists of specialised General Organisations attached to Ministries.
To each such organisation is attached a certain number of industrial companies, as the following table shows:

	Ministry or Authority	No. of Industrial Organisations	No. of Industrial Companies or Units
1.	Ministry of Industry Petroleum & Mineral Wealth	10	15
2.	Ministry of Supply & Internal Trade	5	39
3.	Ministry of Economy & Foreign Trade	2	6
4.	Ministry of Health	1	12
5.	Suez Canal Authority	1	9
		19	217 Companies with 780 Units

The Private Sector consists of two sub-sections: section with 1 to 9 workers per industrial unit and section with 10 or more workers per industrial unit. The total number of industrial units amounted in the year 66/67 to 149,653 with 712,202 workers giving a production of 280 MLE about half of which resulted in units or companies with 1 to 9 workers and the other half with 10 or more workers. In the same year the Public Sector consisted of 792 industrial units engaging 472,216 workers giving a production of 1555 MLE.

Public Sector's Organizations

1. The Ministry of Industry, Mineral Resources and Electricity which includes the Administration of Industrial Information and Foreign Scientific and Technical Relations.
The Administration maintains contact with related international organizations and avails itself of all possible documents and publications from local and foreign organization in order to provide for the information requirements of existing and projected industries.

   The Ministry's General Organizations cover the following specific fields:

   Food Industries, Spinning and Weaving, Technical Industries, Electrical and Electronic Industries, Productive Co-operation and Minor Industries, Chemical Industries, Building Materials and Ceramics, Metal Industries, Petroleum, Mining, Geological Survey and Electricity.

2. General Organizations under the Ministry of land and Agrarian reform

3. General Organizations under the Ministry of Economy.

4. General Organizations under the Ministry of Agriculture.

5. Control Organ for Mobilization and Statistics - which has a computerized collection of diverse industrial statistics.

6. Central Organ for Organization and administration which supervises the operations of the public industrial sector,

7. The Central Organ for Training - which is responsible for the training of technicians and skilled workers and maintains an up-to-date documentation centre on training and productivity.

8. Central Organ for Auditing which evaluates the annual financial statements of each industrial company in the public industrial sector.

National Organizations

1. The National Information and Documentation Centre which was established with UN Technical Assistance in 1954 to perform information work in the fields of science and technology. Its services and activities include:

   - Publications. These include abstracts of scientific and technical papers published in English and French twice yearly;

     Documentation Bulletin of the National Research Centre, technical information for the textile industry.

   - Preparation of bibliographies on request.
   - Reproduction of material from the A.R.E. and abroad
   - Translation
   - Documentation research
   - Promotion of new information services and development of special libraries in existing scientific and industrial organizations.
   - Training in information and documentation.
   - Library. It is intended that the Centre's library be developed into the national reference library of science and technology.

- Preparation of the Union catalogue of Scientific Periodicals in the A.R.E.

- Organization of international seminars and training courses.

2. The Egyptian Agricultural Organization - which acts as an information centre for farmers.

3. The National Planning Institute - which carries out planning studies. It maintains a library and a documentation Centre and a computor centre.

4. The National Scientific Research Centre - which includes departments of chemistry, agriculture, food and nutrition, mineralogy, ceramics and glass.

Research Organizations The Academy of Scientific Research and Technology

1. The Supreme Council for Scientific Research - which is concerned with the planning, co-ordination, and guidance of development. Relations with a number of European, Asian, and African countries and with international organizations are maintained by the Council. Its executive Organizations on Industrial Research, Agriculture Research, and Mining and Water Research supervise the following research bodies which in addition to performing research, provide consultancy services to industry:

   - National Research Centre
   - National chemical Research Centre
   - National Physics laboratory
   - Metallurgical Research Centre
   - Petroleum Research Institute
   - Textile Research Centre
   - Electronics Research Institute
   - Central Laboratory for Metrology and Material Testing

- National Institute of Standards

2. The El Tabbin Metallurgical Institute for Higher Studies which into 1968-69 to serve the metallurgical industries in the fields of specialization, research, and design of metallurgical equipment. It has research laboratories and a library.

3. The Atomic Energy Establishment -- whose Scientific Information Division is pursuing the possibility of establishing regional information centres under the International Nuclear Information System being prepared by the International Atomic Energy Agency.

4. The Documentation Research Centre for Education.

5. Industrial Development Centre for the Arab states which includes among its objectives the promotion of industrial information and creation of close relationships with advanced sources of information. Under its auspices, a Textile Industries Institute is being established in the A.R.E. with the co-operation and assistance of the UNDP and UNIDO.

6. University research facilities:

Other Organizations

1. The Egyptian Federation of Industries -- whose members include the main industrial concerns in the public and private sectors. The Federation publishes the quarterly magazine "Industrial Egypt" and the "Technological Bulletin" covering industrial legislation, statistics, annual reports, productivity and industrial planning.

2. The Egyptian Society of Engineers
3. Chambers of Commerce and Chambers of Industry
4. The National Institute of Management Development whose management Information Centre collects and disseminates information on up-to-date management procedures; co-ordinates research work, and answers specific inquiries.

Libraries

1. Egyptian National Library
2. Ministerial Libraries.
3. Bank of Egypt Library.
4. University Libraries.

EGYPT

Under the Ministry of Industry, petroleum and mineral wealth is the department of industrial information. The activities of this department were reported to the seminar by Mr. Mohamed Abdel Rehim El Guindi. The purpose of the department is to increase productivity most efficiently, that is, by the cheapest possible means resulting in the best possible products.

To achieve its aims, the department has set up two divisions:

(a) The division of productivity. The main task of this division is to set training courses of technocrats of all cadres. It also advises companies and different industries on managerial problems and efficient running of those companies and industries, such as industrial safety, publicity, labour unions, etc.

(b) Education and Training Division. This is concerned with skilled, semi-skilled workers in industry. It gives on-the-job training for the purposes of up-grading those people already on the job. It also provides training for future instructors in vocational institutions for different trades. The technical information section of the department gives help to specialists within the department. This is done through organised seminars.
The section also gives information to industrialists (and this caters for over nine different sectors of industry) as well as the public. This is done through (among other methods) exhibitions depicting the state-of-trade in production as well as marketing.

To publicize their activities, the department publishes a quarterly journal called "Productivity" which is distributed to people responsible for industry in government as well as the private sector.

Attempts are made to exchange materials within the Arab world and with countries outside the Arab world. There has, therefore, been set up a specialised library on industrial management and this puts out a monthly abstract bulletin circulated to people in industry.

IDCAS

This is the Industrial Development Centre for the Arab States consisting of 14 Arab States and 5 Gulf States. Its activities were reported on by Mrs. Soumaya Shaaban of the same organization.

The organizational set up of IDCAS is a division of the centre into five major departments one of which is concerned with industrial information and its dissemination. This department is again divided into units. Furthermore, there are eight centres (in eight Arab States) each of which specializes in a particular industry and supplied information on that industry.

To effect an efficient industrial information system, IDCAS co-operates with other governmental and non-governmental international organizations so as to avoid duplication of work. The information system of IDCAS is computerised and stored both in Arabic and English.

Although IDCAS is mainly concerned with Arab states, obviously foreign documents are also used to extract information. So a world wide correspondence is maintained.

The centre organises courses for industrial information officers.

Problems: (1) Lack of publicity IDCAS get information enquiries from such organizations as UNIDO and OECD. They would like to get more enquiries from other organizations especially private or national industrial organizations.

(2) The Centre finds difficulties in obtaining unpublished materials for quick usage by their customers.

(3) There is a reluctance by some organizations engaged in similar activities as merely a duplication of work.

(4) IDCAS finds difficulties in identifying its users or would be users and pinpointing their problems.

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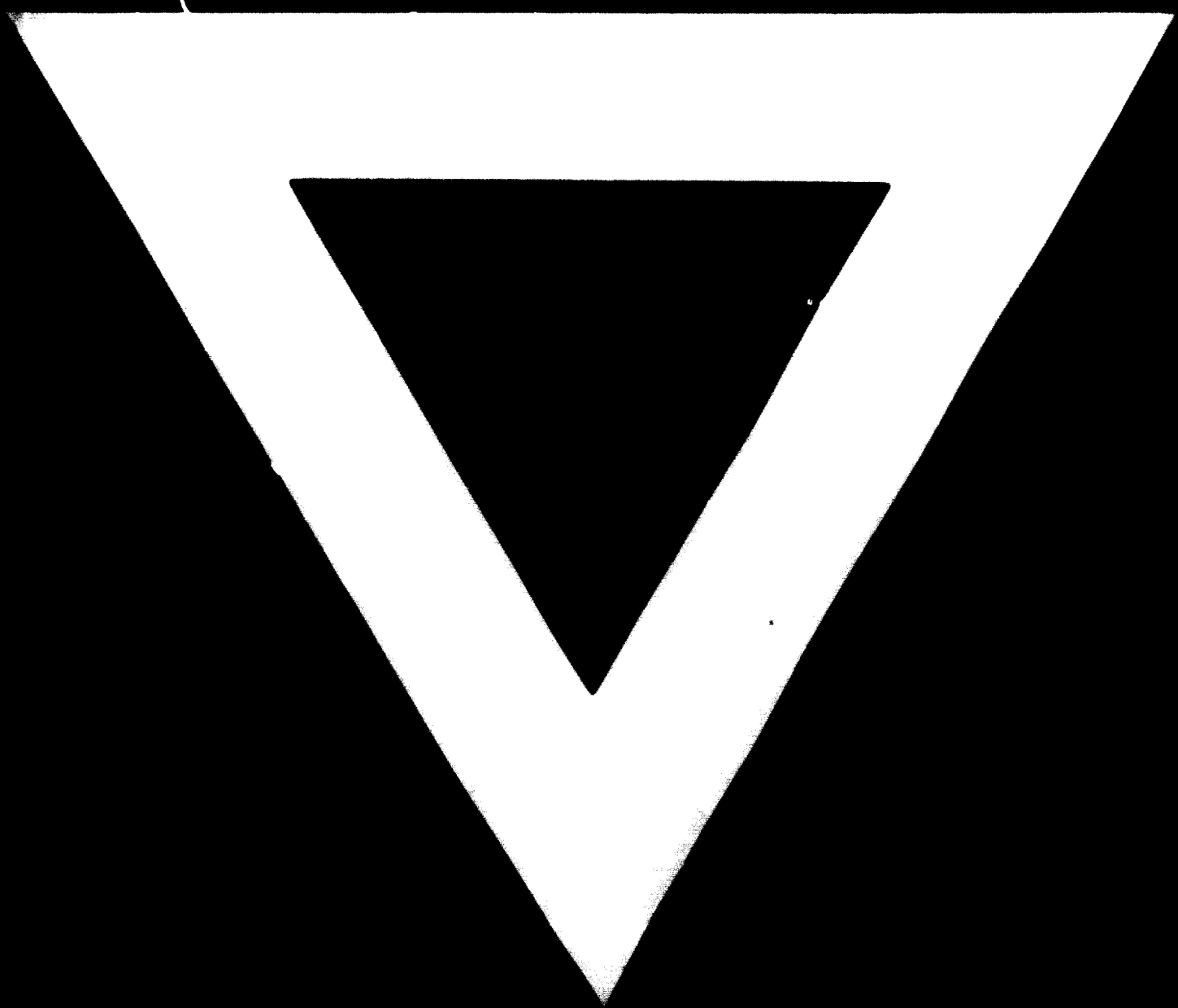

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