



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org



05304



Distr.
LIMITED

ID/WG.153/9
7 May 1973

ORIGINAL: ENGLISH

United Nations Industrial Development Organization

Seminar on Plastics Application
in Developing Countries

London, England, 18 - 27 June 1973

THE PRESENT STATUS AND FUTURE PLANS
FOR DEVELOPMENT OF THE PLASTICS INDUSTRY IN EL SALVADOR
AND TECHNICAL ASSISTANCE REQUIRED^{1/}

by

Guillermo A. Menendez
Plásticos y Metales S.A.
San Salvador, El Salvador

^{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. This document has been reproduced without formal editing.

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

- 2 -

CONTENTS

Foreword	Page 3
Past And Current Trends	Page 4
Major Problems Retarding Growth	Page 5
Plans for Future Expansion	Page 6
Conclusions	Page 7
Tables	Page 8

FOREWORD

It is my opinion that a paper such as requested should have been prepared by Governmental institutions since they required from industry and have all data concerning consumption of raw materials, imports and exports, etc., as well as the elaboration of studies, plans and projects for present and future expansion.

The contents of this paper are my own personal knowledge and belief on the subject since even though time was short for preparation, the writer tried to obtain some statistics from different institutions and unfortunately, this was not granted.

Past and Current Trends

1. The plastic industry in El Salvador very well can be considered as a very young industry. Towards the end of the decade of the forties, the first plastic processor was established with the sole purpose of manufacturing combs under the injection molding process. At the beginning of the year 1951 a second firm was started for the molding of housewares. These two firms remained alone during the whole decade. It was until the decade of the sixties that the real growing and development of this industry commenced in our country. At present we have thirty one plastic processors manufacturing film, records, chess, pipes, housewares, toys, dolls, wire coating, boats, etc.
2. Many of these firms utilize more than one polymer and convert the raw material into finished articles under more than one process. To be more precise, an analysis was made of these industries to find out the raw materials they use, the processes for conversion and their main line of products. The results have been tabulated in tables I, II and III respectively.
3. The tables show that the gross of the firms are manufacturing housewares and toys. Looking at the second table one sees, and as expected that the most known materials are polyethylene and polyvinyl chloride followed by polypropilene and polystyrene. The engineering materials are not used in El Salvador, if not unknown to many persons. Finally, One can see that injection, followed by extrusion molding, is the technique most used in our country. Unfortunately, data such as the consumption of raw materials was impossible to obtain due to the shortage of time since this information had to be gathered from the different suppliers. However, from the only information at hand, the consumption of polypropilene in the year 1972 by two firms alone was a little under one thousand metric tons.

4. The accelerated development of this industry, especially in injection and blow molding, resulted in a disloyal price competition which ended in a miscare of the quality of the products, to such a point that the word "plastic" became associated with "cheap". Moreover, many firms started to give long credits which later in turn became bad debts and as a result more than fifty per cent of those molders were bankrupted. This is a good point to remember that El Salvador is one of the members of the Central American Common Market and that similar situations were facing the other four members. At present, the firms are a little bit more solid and this problem is being overcome slowly. However, many firms are still far from selling high quality products.

Major Problems Retarding Growth

5. One of the first problems encountered by plastic people in our country was the lack of obtaining molds and dies. Most tools bought in the United States of America or Europe are very expensive, those bought from Italy or Portugal are less expensive indeed but the time for delivery usually runs very high. Finally, one can obtain some second hand molds or made in some other countries but they are troublesome. This necessity was known by most of the different metal shops in the country and thinking that the making of a mold did not require more knowledge than that of machining other metal parts, many plastic processors were convinced from ordering some molds in the country which became a great failure.
6. The above problem was first solved by one factory by investing in a mold making department to make their own molds. Little by little most other firms are buying their own machine tools and contracting foreign mold makers to run the shop.
7. Another problem probably overlooked by many persons is the fact that due to the technological advances in the industrialized countries,

the machinery and equipment is being built more sophisticated each time. More and more electronic components are being incorporated in the instruments and when a small part fails a considerable amount of time is lost in fixing the part. Needless to talk about the small firms which in many cases can not repair the part and have to purchase the complete part.

8. As mentioned earlier, many firms have gone out of business. This was due in part to the belief that with the Central American Common Market there is enough market for everybody. As a consequence, all industries were equipped to produce more or less the same items resulting in a rapid saturation of the products together with prices so low that many firms could not meet their responsibilities and were forced to close. In this sense, there should exist an office in charge of gathering this type of information and should encourage new investors into fields not exploited in our country and which are of great necessity. The above does not mean that you will no longer be free to invest where you please but will be of great help in the sense that many misunderstood information as to the profitability of the business would be straightened out.

Plans for Future Expansion and Diversification

9. The general plans for development or expansion in a nation wide scale are those included in the quinquennial plan of the present government and of course those do not include plan for any type of industry in particular. It is obvious that each of the plastic processor has his own plans for expansion or diversification for the near future but these are considered private for each industry.
10. However, the plans include very ambitious programmes in so far as building for minimum dwelling; areas in which plastic material would be of great help in reducing costs as well as the time for completion the houses.

11. Conclusions

- It seems that in this country many people of all levels do not know what plastic really is; which are its uses and limitations. And, knowing the present and future perspective of plastic materials, it is time to think to include the polymer science in our schools and particularly in our universities. The fundamentals, designs and uses of plastics should be included to the Engineering and Architecture schools to encourage the students to use plastic materials.
12. The governmental institutions, such as Instituto de Vivienda Urbana, Direccion de Urbanismo y Arquitectura and particularly Consejo Nacional de Planificacion y Coordinación Economica, should consider the benefits granted by the plastic materials when planning the solutions to problems such as dwelling, hygiene, salubrity, social security, safety, agriculture and others.
13. The present industry should spend more time learning about the basic plastic families as well as the hundreds of individual types in order to choose the right plastic to use in a particular application at the lowest final unit cost.
-

Housewares	6
Toys	4
Films	4
Shoes and Soles	4
Collie	3
Profile	3
Bottles	2
Piping	2
Industrial Components	1
Records	1
School Items	1
Film Coating	1
wire Coating	1
Carpet	1
Luggage	1
Combs	1
Filament	1
Ornaments	1

**Table I. Plastic Processors
by End Product.**

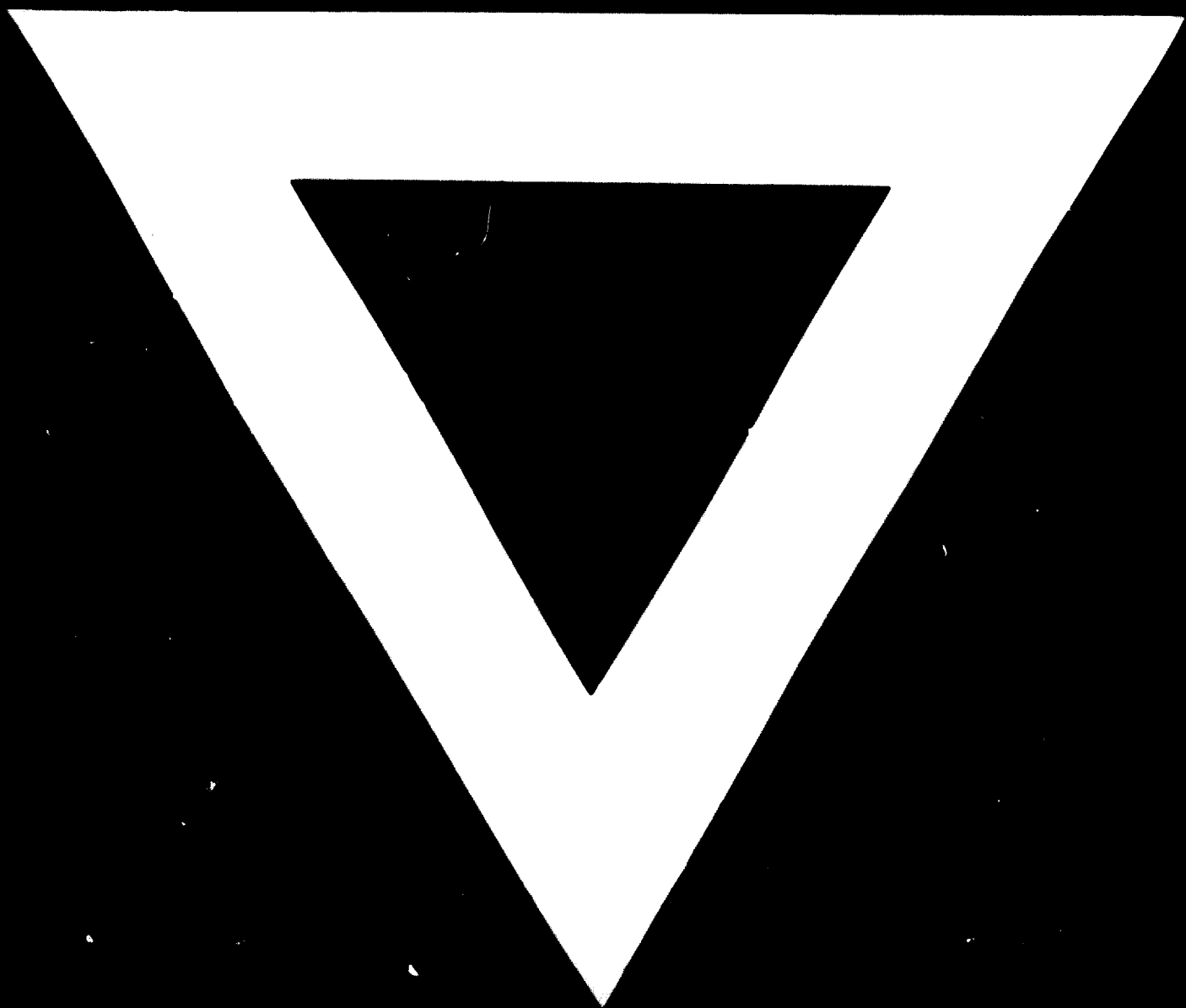
Polyethylene	19
PVC	12
Polypropilane	9
Polystyrene	9
Plasticole	3
A.B.S.	3
Fiberglass	2
Phenol	2
SAN	2
Cellulose Acetate	1
Acetal	1
Melamine	1
Nylon	1
Polycarbonate	1

**Table II. Plastic Processors
by Type of Polymer.**

Injection	15
Extrusion	11
Blow Molding	4
Compression	4
Rotational	2
Vacuum	2
Calendering	1
Manual	1

**Table III. Plastic Processors
by Type of Process.**





74. 09. 13