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ASSISTANCE IN CARPET DESIGN AND MARKETING ,

SI/MAT/78/802 ,

MALTA ,

Terminal report

Prepared for the Government of Malta
by the United Nations Industrial Development Organization,
executing agency for the United Nations Development Programme

Based on the work of N. Harinaran, carpet specialist

United Nations Industrial Development Organization
Vienna

id.79-1239

Explanatory notes

The monetary unit in Malta is the pound (£M). During the period covered by the report, the value of the pound in relation to the United States dollar was £M 1 = \$US 2.65.

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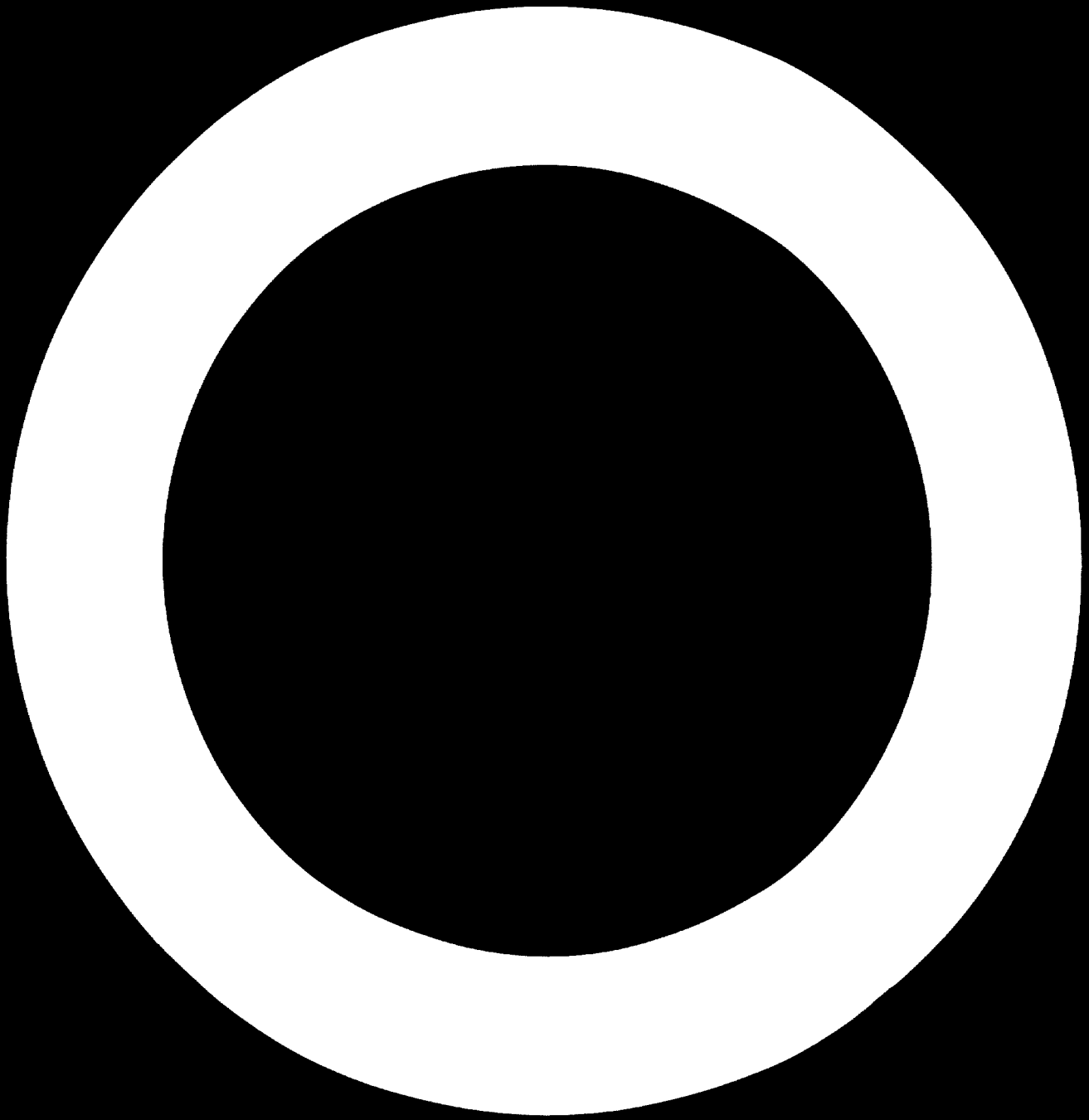
Mention of firm names and commercial products does not imply the endorsement of the United Nations Industrial Development Organization (UNIDO).

ABSTRACT

A study was undertaken of Mdina Carpets Ltd, formerly Malta Carpets Ltd, a parastatal enterprise, by an expert from the United Nations Industrial Development Organization (UNIDO) for the project "Assistance in Carpet Design and Marketing" (SI/MAT/78/802) sponsored by the United Nations Development Programme (UNDP). The expert was in Malta from 5 to 17 February 1979.

The assignment was to help the company to determine in detail the type of assistance required to improve its competitiveness.

The main recommendations concerned the designs, sizes and qualities of carpets. Other recommendations were to set up sales outlets in Malta in tourist areas; to display carpets in the embassies and missions of the Government of Malta; and to ban the import of machine-made carpets.



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INTRODUCTION

A study was undertaken of Mдина Carpets Ltd, formerly Malta Carpets Ltd, a parastatal enterprise, by an expert from the United Nations Industrial Development Organization (UNIDO) for the project "Assistance in Carpet Design and Marketing" (SI/MAT/78/802) sponsored by the United Nations Development Programme (UNDP). The expert was in Malta from 5 to 17 February 1979.

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I. BACKGROUND

Mdina Carpets Ltd, formerly called Malta Carpets Ltd, belongs to the Ministry of Trade, Industry and Parastatal and People's Industries, Government of Malta. It was set up in March 1975 with assistance from the Tientsin Carpet Industrial Company in China, in the form of machinery, equipment and initial raw materials. This assistance ended after preliminary training had been given to the personnel in the processes of winding and warping of cotton yarn for the warp; preparations of warp yarn in suitable plies and different colours for making the pile; designing; weaving; knotting of carpets after mounting the warp cotton yarn onto looms; clipping, embossing and levelling the woven carpets after removal from the looms; final chemical washing of carpets for the requisite lustre; and finishing processes such as mending, fringing, edge binding.

The machinery supplied from China, which is installed at the Malta Carpet Co. is:

Metallic carpet looms with adjustable rollers for winding and rewinding the weft yarn and also the woven carpets etc. with capacity to make a carpet of 10.5 feet width on each loom	50	Installed capacity is about 200 m ² per month weighing 600 to 700 kg
Design table and the necessary equipment for preparing designs	1 set	
Working tables with suitable adjustments to carry out the electrically operated clipping and embossing processes on the carpets as removed from the looms	6	
Carpet levelling machine	1	
Hydro-extractor	1	
Fluted bobbin winder	1	
Balling machine (i.e. to make woollen yarn in small balls in the different colours for knotting purpose)	1	
Warping machine	1	
Warp fastener	1	
Electric scissors for carpet clipping, carving and embossing		

Electric scissors for hand trimming

Knives for carpet weaving

Ordinary scissors

From the opening of the Malta Carpet Co. (1 March 1975) to the end of January 1979 about 1,008.837 m² of carpets of the quality of 90 knots^{1/} per foot and 1,743.127 m² in another quality of 45 knots^{2/} per foot have been produced. The recently fixed selling price of the 90-knots quality is £M 91 per square metre and of the 45-knots quality, £M 58 per square metre.

The sales of carpets are found to be only nominal because of their high prices. Huge stocks of unsold carpets are lying in the company's warehouse, pledged to the National Bank or others.

Of late, the carpet company has restricted its production to specific orders which are very scarce. It also sells carpets once in a while to visitors and tourists coming to Malta. This is not encouraging. Only two carpet looms are working, engaging five to six female weavers.

The carpets are produced in a few Chinese designs called "Esthetic", "Peking", "Floral", and "Bamboo". A few embossed or carved designs with Chinese floral designs are also produced. Recently, some carpets have been made with local Maltese motifs called "Ta'qali" in geometrical designs but these are unattractive.

^{1/}90 knots per foot is 8,100 knots per square foot, or 9,750 knots per square metre; the present weight is 9 kg per square metre against a needed weight of 3.5 to 4 kg per square metre.

^{2/}45 knots per foot is 2,025 knots per square yard, or 2,800 knots per square metre; the weight should be only 3 to 3.25 kg per square metre.

II. FINDINGS

The company sells its carpets with great difficulty for the reasons discussed below.

The designs are not always correctly reproduced, i.e. the figures are distorted owing to weaving defects and to the contraction of the warp and weft caused by the over-use of chemicals when washing.

The raw material consumption, including the losses while weaving, knotting, clipping, embossing and final finishing, is very high. Also, there is a loss of warp yarn since the warp yarn stretched to the required length and width on the looms is not fully and economically utilized. Smaller sizes of carpets are woven and the warp yarn is thus cut away from the looms and wasted.

The embossing and clipping operations lack the required perfection.

The chemical washing of carpets takes too long and the chemicals, i.e. caustic soda, bleaching powder and acids, are highly charged hence there is no lustre or sheen as there should normally be after a chemical washing. Colours, especially dark reds and blues, bleed into other shades after a chemical wash thus spoiling the colour and designs of the finished carpets.

The hydro-extracting process is redundant since carpets can be conveniently hung in the open air to remove excess water before drying. This mechanical hydro-extraction process tightens the carpets and makes them rigid when they should be flexible.

The carpets are dried inside a closed electrically-heated chamber without seeing to the fastness of the colours.

The levelling machine operation causes stress on the finished carpets breaking or disconnecting the warp and weft yarn and consequently, in many cases, the woollen pile comes out.

The right quality of dyed woollen yarn is not being used resulting in fluffs and loose fibres coming out of the finished carpets even when they are brushed by hand in the ordinary manner.

The time involved in weaving, clipping, washing, embossing, carving, finishing etc. is too much considering the size and quality of the carpets.

The pile height and the allowances for shrinkage of width and length during weaving, washing etc. are too high, entailing wastage of raw materials.

Selling prices have been fixed without comparison with the prices of similar products available in other countries. For example, the selling price for the 90 knots per foot quality in the international market is only £M 40-50 per square metre against the price of £M 91 per square metre quoted at present by the Malta Carpet company. Similarly, for the 45-knots quality the international price is approximately £M 25 per square metre. Of course, the main criteria for fixing such prices are the cost of all raw materials, workers wages and overheads etc., which all seem to be on the high side.

III. CONCLUSIONS

No doubt the Chinese when establishing the company only intended to train skilled workers and did not deal with the commercial aspects. The economics should have been worked out in advance by the Malta Carpet company before embarking upon large-scale production and reaching the present situation of uncertain marketability of the end products, huge stocks and the necessity to restrain future activities.

The world market for hand-knotted carpets is increasing daily. The main markets are Australia, Canada, Federal Republic of Germany, France, Italy, the Scandinavian countries, Switzerland, United Kingdom and United States of America.

Since the people in Malta have the necessary taste, skill and acumen to develop the carpet industry, it is definitely worthwhile and feasible to promote this industry. Also Malta is an important international tourist centre which should attract tourist sales and help to promote carpet exports. The country's central situation in the Mediterranean makes it easier for quick and cheaper movements of goods to international markets, especially to the Libyan Arab Jamahiriya, the United Kingdom and Europe, compared to competing countries such as Afghanistan, China, India, Iran and Pakistan or even Algeria and Morocco.

IV. RECOMMENDATIONS

1. The designs, sizes and qualities recommended for diversifying production are given in the table below.

Recommended designs, sizes and qualities of carpets

Design	Size (feet)	Quality	
		Knots per square inch	Pounds per square yard
French Aubusson and Savonnerie (embossed and clipped)	7 x 9	40-50	3.5-5
	9 x 9		
	9.8 x 15		
	9 x 13		
	10 x 13		
	12 x 20		
Chinese designs (embossed and clipped)	sizes as above	40-120	3.5-5
Persian types (plain clipping)	2 x 3	90-224	3-5
	2 x 4		
	2 $\frac{1}{2}$ x 6		
	2 x 5		
	3 x 6		
	4 x 6		
	4 x 7		
	5 x 8		
Mori Bokhari, Pakistan designs (plain clipping)		50-60	3.5
Commercial quality of Romania in all Iranian designs in 22,400-40,000 knots per square yard (plain clipping)		20-45	3-5
Afghan Rugid (plain clipping)		16-35	2.5-4
Berber carpets (shaggy) of Morocco (trimming only)		18-20	5-6
Modern designed carpets (clipping and embossed)		40-100	3-5
Plain broadloom carpets (clipping)		25-36	3-3.5

2. The economics of production of each of these qualities of carpets have to be worked out in advance taking into account the availability of local raw materials, especially greasy sheep wool which amounts to over ten tons per annum, and the right qualities of raw materials to be imported to augment the local supplies.

3. The production of carpets should not be centralized in Ta'Qali but should also take place in the villages where labour is cheaper. At present, under the Minimum Wages Act of the Government, a worker in the city is to get a minimum of £M 18 per week.

4. Production norms for each labourer per 8-hour day should be specified as follows:

(a) For weaving: 6,000 knots for designed carpets; 8,000 to 10,000 knots for plain carpets;

(b) For clipping and embossing: 3-4 m² depending upon the intricacy of the designs;

(c) For washing: about 20 m².

5. The embossing or carving work should be restricted to a minimum since this involves more time and labour, and wastage of the pile yarn. As far as possible only designed carpets in plain pile should be produced to curtail labour charges and the consumption of raw material. The aim should be to produce fine varieties of designed carpets, without embossing or carving, for which demand is increasing in international markets.

6. The motifs for designs can be adopted to a large extent from the paintings and architectural work found in the old buildings, museums and churches in Malta. The island is plentiful in this and in the natural fauna, flowers and plants which should inspire creative designs.

7. The procedure of washing carpets for the lustre finish should be simplified to see that the manual labour is only involved to the maximum as far as possible for perfection and elegance. The chemicals used should be standardized with reference to the quality or hardness of the water.

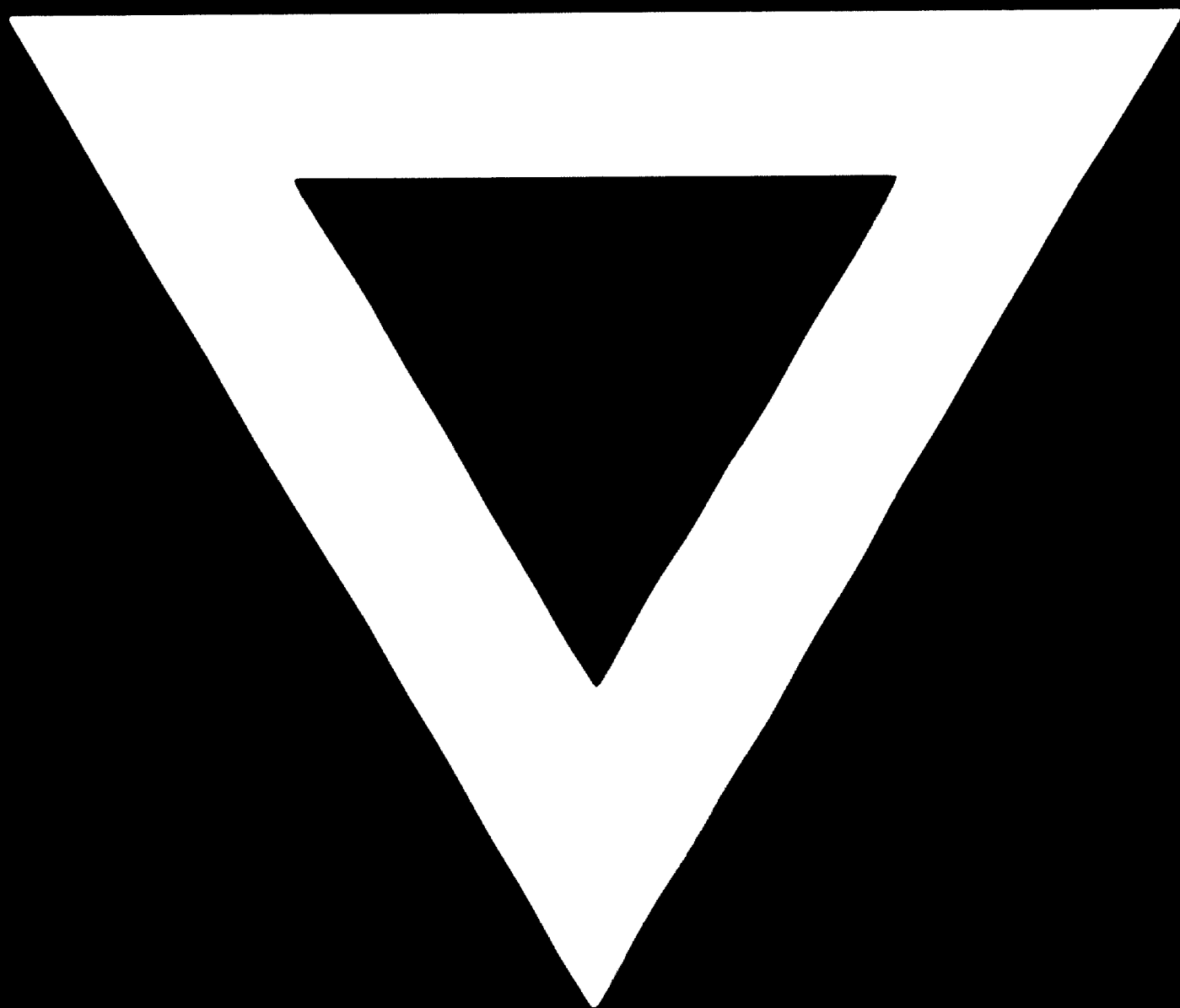
8. Designs should be done on graph paper according to set calculations depending upon the size and quality of each carpet and they should be coloured for easy reproduction on the loom by each weaver. The present system of reading weaving designs from the drawing paper is time-consuming and labour-intensive owing to the fact that only the code number of the colours of the

yarn to be used are shown. For quicker and more correct weaving, the designs should be coloured, according to the colours to be used in each design.

9. Efforts should be made to produce cheap wall hangings and small carpets with local designs to attract tourist sales. This might ultimately promote the sales of the large carpets as well.
10. There should be wider publicity of Maltese carpets.
11. Sales outlets should be set up in Malta at the tourist centres, airport, harbour etc.
12. Locally-produced carpets should be displayed in the Missions and Embassies of the Government of Malta in different countries.
13. Regular market research should be carried out in important carpet-selling countries for necessary guidance at home.
14. A small unit should be set up with 100 spindles to spin into suitable counts of yarn (into the woollen or semi-worsted system) the locally available raw wool. A dyeing unit with open dye-vat steam-heated system should be envisaged as an adjunct to the existing carpet factory at Malta.
15. As a developmental measure to promote the hand-knotted carpets, the Government of Malta should ban the import of machine-made (tufted) carpets into Malta. The prices of such carpets are always cheaper than hand-made carpets which are costlier all over the world.



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