



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

RESTRICTED

DP/ID/SER.A/1360
20 June 1990
ORIGINAL: ENGLISH

18447

INTEGRATED ENTREPRENEURSHIP CUM TECHNOLOGY
DEVELOPMENT SMALL-SCALE RATTAN INDUSTRY

DP/INS/89/002

INDONESIA

Technical Report: Rattan Industry Training*

Prepared for the Government of Indonesia
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work of Desmond Cody, Chief Technical Adviser
Rattan Industry Consultant

Backstopping Officer: C. Antonio/V. Gregor
Institutional Infrastructure Branch

United Nations Industrial Development Organization
Vienna

* This document has not been edited.

V.90 85849

EXECUTIVE SUMMARY

This report provides details of the recently completed industrial training programmes for small-scale rattan producers undertaken by UNIDO in collaboration with UNDP and the Ministry of Industry, Indonesia.

The training programmes were concerned with upgrading rattan craft skills, providing guidance in rattan craft instruction and developing entrepreneurial skills in the industry.

The report also contains recommendations regarding the future development of the small-scale sector of the industry which, if acted upon, will contribute in no small measure to its continued and orderly development especially in respect of export success.

NOTES

The unit of currency in Indonesia is the Rupiah (Rp).
The rate of exchange for the Rupiah during the period of the Project against the U.S. Dollar was Rp.1810,- = 1 U.S. Dollar.

The following abbreviations are used in this report :

- BLK : Balai Latihan Kerja
- CTA : Chief Technical Adviser
- CSW : Central Services Workshop
- DJIK : Directorate General for Small Industries
- ETP : Entrepreneur Training Programme
- ITP : Instructor Training Programme
- K D : Knock Down
- RITF : Rattan Industry Training Programme.

CONTENTS

<u>Chapter</u>	<u>Page</u>
I. Introduction	1
II. Findings	4
A. Course organisation and administration	4
1. Background to design of training programmes.	4
2. Structure of training programmes.	6
3. Organisation administration of training	8
4. Tools, equipment and materials	9
B. Trainee participants	11
C. Entrepreneur training	15
D. Plant visits	17
E. Jakarta Workshop	18
F. Marketing	19
G. Cluster workshop counselling	24
H. Project assessment	26
I. Follow-up actions	31
III. Conclusions and Recommendations	39
A. Conclusions	39
B. Recommendations	41
 ANNEXES	
I. Training programme in bar chart form	35
II. Expert's job descriptions	36
III. Individuals and organisations that co-operated in the project	44
IV. Entrepreneur training programme	46
V. Jakarta workshop programme	47
VI. UNIDO group evaluation	49
VII. Individual expert reports	57

I. INTRODUCTION

This report is concerned with the implementation of the training programmes for rattan furniture craftsmen and rattan entrepreneurs as envisaged in the Project Document DP/INS/89/002. The main objective of the project was " to organise programmes for the training of the trainers, to upgrade techniques of production by craftsmen, for entrepreneurial development, for enhancing business and marketing skills in response to export possibilities and for strengthening the role of the Directorate General for Small Scale Industries (DJIK) in facilitating the integrated development of small industry clusters "

The preliminary work associated with the identification of the training needs for this sector of the Indonesian Rattan Industry and the subsequent preparation of the training programmes to be carried out at each of the training centres in Semarang, Medan and Ujung Pandang are fully described in the first technical report prepared by the CTA. These were completed, together with the recruitment of the international and national experts and the preparation of the instructor and entrepreneur training modules, so that actual training could commence in Semarang on 27 November 1989, and the remainder of the training programmes in accordance with the timetable in Bar Chart form in Annex I. The major activities of the project may be summarised as follows :

<u>Aspect</u>	<u>Approximate work/months</u>
1. Preliminary survey of Indonesian small scale Rattan Industry	1.0
2. Sourcing and selection of tools and equipment	0.5
3. Recruitment of International and National Experts.	1.0
4. Preparation of individual training centres	7.5
5. Preparation of training modules	1.5
6. Instructor training	17.0
7. Entrepreneur training	3.0
8. Marketing activities	1.5
9. Miscellaneous related activities	1.0
10. Cluster Workshop Counselling	6.0
	<hr/>
Total	40.0

The project commenced on 27 September, 1989 and the training component was completed on 31 March 1990. This was earlier than was originally anticipated and was done in response to the request of the counterpart agency which indicated that budgetary regulations demanded that the monies set aside as part of the Government of Indonesia's input should be expended by 31 March, 1990. Otherwise they would lapse and could not be recouped. The follow-up component, which is concerned with the adaptation, organisation and development of the Common Services Centres and the counselling at cluster workshop level in each of the centres referred to, is currently taking place and shall be completed on

30 June, 1990.

The counterpart agency co-operating in the implementation of the project, was the Directorate General for Small Industries (DJIK) of the Ministry of Industry in collaboration with the Ministry's Regional Offices (Kanwil) in each of the centres. They, in turn, arranged for the provision of suitable premises in which to carry out the training activities, the provision of accommodation and other requirements for the participants and generally provided background and administrative assistance in relation to all aspects of the programmes. The training itself was carried out in each of the three centres at the Balai Latihan Kerja (BLK) or Industrial Training Centres which are under the jurisdiction of the Ministry of Manpower. In all cases, the project received the fullest co-operation from the Head of each centre and his staff notwithstanding the fact that they were fully occupied in conducting their own separate training activities. Nevertheless, a very considerable amount of time was required in order to prepare each location satisfactorily and this was done by the Project Staff itself.

Mr. Hotnan Pakpakan, an Industrial Engineer and senior staff member of DJIK was appointed as full-time project counter part co-ordinator and generally acted as a liaison between the project, BLK and the Kanwil as well as looking after the needs of the participants and assisting in the sourcing of class materials and other requirements purchased locally.

In addition to the CTA, the following international and national experts were engaged in the Project.

Mr. B.Ebrada,	Rattan Technologist	(Int.)
Mr. F.Borromeo,	Rattan Technician	(Int.)
Mr. G.Soliano,	Rattan Technician	(Int.)
Mr. J.Ferreros,	Rattan Marketing Expert	(Int.)
Mr. K.Wiyoso,	Rattan Technologist	(Nat.)
Mr. L.Simanora,	Rattan Technician	(Nat.)
Mr. Khasdani,	Rattan Technician	(Nat.)

The job descriptions of the CTA and all experts engaged in the Project are included in Annex II. Individuals and organisations that co-operated in the project are included in Annex III. All experts prepared reports concerning details of their activities and these are incorporated in Annex VII.

II. FINDINGS

A. Course Organisation and Administration

A.1 Background to Design of the Training Programmes

From the outset of the Project, it was made clear that most of the prospective trainees intending to participate in the training programmes would be drawn from the small-scale rattan enterprises and cottage type workshops. The remainder would come from government sources and the selection would be the joint responsibility of DJIK and the various Kanwils.

It was therefore felt necessary to become familiar with the current methods of operation of those workshops and the levels of skill pertaining, in order to design a training programme which

would respond realistically to their immediate needs and the objectives of the Project Document. The resultant assessment of the industry at this level revealed, in general, low levels of craftsmanship, the absence of any, other than the most primitive of hand tools, no mechanisation, poor quality end products and little or no knowledge of modern rattan production technology or techniques.

Accordingly, it was necessary that the design of the training programmes should take account of these shortcomings and ensure that the resultant work content should carefully bridge the gap between the trainees current craft status, or lack of it, and what would be possible in a period of four weeks, which was the time set aside for each Instructor training session. Particular emphasis would, therefore, be placed on the following elements :

- i) Raw materials selection and utilisation ;
- ii) Knowledge of and safe use of hand and power operated tools normally in use in the rattan manufacturing sector ;
- iii) Selection and use of basic wood/rattan processing machines ;
- iv) Basic rattan working operations by hand and machine ;
- v) Various construction joints used in rattan production;
- vi) Frame construction for a variety of end products ;
- vii) Variety of moulding and framing jigs, their design, construction and use ;
- viii) Steam bending and adjusting techniques ;
- ix) Wicker work, weaving and binding techniques ;

- x) Surface finishing :
- xi) Technical drawing techniques and understanding of working drawings ;
- xii) Theory of basic design for dimensional accuracy, shape, proportion and decoration ;
- xiii) Practice in free-hand drawing and design relevant to rattan furniture and other products ;
- xiv) Basic workshop management principles including layout, work planning, supervision, workshop accounts, costing, quality standards and good housekeeping.

For more detailed information, please refer to the relevant manuals.

A.2. Structure of Training Programmes

The programmes were designed to cover a period of four weeks and the participants were divided into four groups, so that each group would spend roughly one week being trained in each of the four main elements, namely,

- Group A - draughtsmanship and product design; (Mr.Kresno Wiyoso)
- Group B - product development including, model and jig-making ;
(Mr.Borromeo)
- Group C - constructional techniques including further jig-making, steam binding and framing (Mr.Suliano and Mr.Kasdani)
- Group D - weaving, binding and surface coating. (Mr.Leo Sinnamora)

In the event and as elaborated fully upon in Mr. Ebrada's report, the lack of experience and low level of craftsmanship of the trainees coupled with the short time at the disposal of the project, obliged the abandonment of this approach and its substitution by a more specialised type of training. The basic elements of training and the work content, as described, would remain, as would the four groups but each would now concentrate on a particular element and as far as possible, become proficient in it. In this way, real progress would be made and it was also found possible, on occasion, to familiarise each group with the activities of the others.

The overall aim of the curriculum was to provide a framework within which the trainees could receive systematic, theoretical and practical training in as broad a range of skills as possible associated with the rattan crafts. Those who successfully completed the programme should ,

- (1) (a) Be competent in the use of tools, materials, processes and equipment of their craft.
(b) Be familiar with safe working practices and methods.
(c) Be able to perform their work in an efficient and cost-effective manner.
- (2) Develop the experience and the stamina necessary for the exercise of their craft.
- (3) Develop the confidence and judgement which will enable them to achieve maximum benefit and personal satisfaction from their work.

A.3. Organisation and Administration of Training

In general, the UNIDO experts took responsibility for the preparation of the training centres and the implementation of the practical and related training for both trainee instructors and entrepreneurs. The selection of the trainees, arrangements for their travel and accommodation, and the provision of adequate and basic requirements such as space, power, work benches, drawing tables etc. were to be the responsibility of DJIK and the three Kanwils concerned.

DJIK had been fully briefed by the CTA and Mr. Ebrada of these needs well in advance of the commencement dates for each centre. However, a combination of severe budgetary restrictions on the mobility of the DJIK staff as well as other communication problems prevented the message from reaching the Kanwils in a form in which they could act on these matters. This resulted in the experts, having travelled to the centres, being obliged, especially in the case of Ujung Pandang, to wait around for almost ten days before they were permitted to enter the BLK Training Centre and commence their preparatory work. The other requirements referred to posed problems in all three centres and were only resolved after careful and diplomatic negotiations by the project staff. It must be said that such occurrences, though isolated, could have been avoided and were, to say the least, unhelpful in the carrying out of the project.

A.4. Tools, equipment and materials

The tools and other equipment used in each of the training centres are detailed in Mr. Ebrada's Report. Their selection may be considered the minimum consistent with the up-to-date production of rattan end products, especially furniture and enabled the incorporation in training of recognised quality standards for export oriented production. All were sourced locally, i.e. within Indonesia, as were other expendable items such as drill bits, saw blades, countersinks etc.

The more important raw materials included rattan poles, rattan core (for wicker work), rattan splits (for binding), solid wood and plywood (for jig-making), hardware (i.e. screws, nails and staples) and finishing materials, (sealers, stains and lacquers). No difficulty was experienced in obtaining these materials in each of the three centres, mainly because of the co-operation of local rattan furniture factories, which readily supplied all these needs at competitive prices.

As a consequence, the range of rattan sample items which were completed to a high standard at the end of each training period included diningroom chairs, wicker chairs, wicker aranchairs and occasional pieces.

The equipment, jigs and samples, having been itemised, were put in the care of each local Kanwil at the end of each individual training programme for safe keeping until the experts return for the implementation of Phase II of the project. This is dealt with in a later chapter in this report.

A.5. Training Documentation

The documentation, around which each training activity was built, included four manuals, three of which dealt, in considerable detail, with the curriculum described on pages 5 and 6 of this report and the fourth manual was concerned with rattan entrepreneur training. All aspects of rattan processing, materials and equipment technology, product design and development, as well as basic management procedures, were included and were presented in a series of training modules which were intended, initially, as a training guide for the rattan experts, most of whom, though highly experienced in their craft, were unaccustomed to presenting it in a more formal manner as required by the training procedure. The manuals were also intended as a permanent reference for the trainees in their future roles as workshop instructors and cluster workshop counsellors.

The project was fortunate in locating an experienced Bahasa Indonesia/English translator/interpreter who, with the technical advice of Expert Kresno Wiyoso, translated all manuals into the Indonesian language. They were subsequently photocopied and distributed to all the participants. Experts Soliano, Borroneo and Ferreros can speak Bahasa Indonesia fluently and thus there were no language or communication difficulties.

In addition, the participants were encouraged to make their own records of events and the experts were instructed to monitor their notebooks daily in order to ensure that this was done satisfactorily.

Finally, as a further insurance that uniform and quality

progress was established and maintained during the entire training sessions, the experts conferred after each days work; activities were reported upon and remedial and other appropriate action decided upon.

B. Trainee Participants

B.1. Worker classification

Workers in the Rattan Industry, as in the rest of the wood-based industries may be classified under three main headings namely, skilled, semi-skilled and un-skilled. Skilled workers are those who have a good educational background and have undergone a recognised period of apprenticeship in rattan production, usually covering a period of three to four years. They would have been trained and experienced in all aspects of their craft, including draughtsmanship, production technology - both practical and the related theory of processes and materials, product development and work planning. The rattan production technician, now an essential element in modern rattan processing, usually derives from this source. Semi-skilled workers are those who are engaged in a limited and simply executed number of processes in which production efficiency and skill would be achieved in a matter of months, rather than years. Such workers are usually employed in large rattan furniture factories where economies of scale and the resultant break-down of skills are achieved by rationalised and large volume production with limited ranges of models. Activities normally included in this category are rattan pole selection and classification, steam bending, the operation of a single machine scraping and sanding, binding

and surface coating. These workers are usually termed operatives. Un-skilled workers, as the name implies, are those who are engaged in non-productive activities such as cleaners, internal transporters, packers etc. They are often called helpers. Other categories with which the current project is not immediately concerned include foremen, supervisors, quality control checkers and progress chasers.

Clearly, therefore, the selection of participants required to undergo a training programme of this nature must be based on criteria which carefully take account of the above worker classifications as well as their skilled background and experience in the rattan industry, their aptitude in labour intensive procedures requiring a high level of hand and eye co-ordination and their ability to rapidly absorb new skills and new techniques. These are the stated objectives of the project document which intended not only to achieve high levels of essential skills but also the ability to transfer these skills "at the shop floor level" (2.0 immediate objective 2).

It is regrettable that few, if any, of these factors were evidently taken into consideration by those, namely, DJIK and the Kanwils in making their selection of participants, as the following break-down of the 210 trainees, attending the three training centres indicates :

	<u>Rattan Industry</u> (some production exp.)	<u>Government Employees</u> (No production Exp.)
Senarang	35%	65%
Medan	63%	37%
Ujung Pandang	41%	59%

Subsequent direct daily contact by the experts with the participants during the course of the training programmes served to confirm and highlight, especially among the government selectees, the absence of any kind of basic skill foundation upon which to build the required capability. Many of them were handling simple processing tools such as chisels, screwdrivers, hammers, gouges and files for, perhaps, the first time in their lives and special care had to be taken to ensure the avoidance of serious accidents. Even those coming from the rattan industry itself fared little better in this respect and it was equally clear that these participants had also very limited experience in the industry.

It should further be borne in mind that the project was intended to upgrade techniques and skills in small-scale rattan processing. Therefore, the levels of skill required must, at least, be those of the craftsman because the successful workshop producer requires them and will continue, to an even greater degree to require them in the future, as he increasingly responds to the essential export specifications of design, quality and competitive pricing. Furthermore, as more and greater mechanisation and specialisation take hold in the industry as a whole, the small-scale producer will assume, to an even greater extent, the major source for rattan craftsmen. Anyone doubting this proposition has only to examine how success was achieved in the great quality rattan furniture producing countries such as the Philippines, Singapore, Italy and the Federal Republic of Germany. All the experts engaged in the project have considerable

in-depth experience of the rattan industry in Indonesia and are unanimous in their views that far more deserving and promising participants could and should have been chosen for what is one of the very few specific training programmes embarked upon in the industry since the imposition of the ban on the export of raw rattan in July 1988 and its subsequent efforts to adapt to the more difficult and demanding role of manufacturing high quality products to compete in world markets.

In making above observations, the CTA neither wishes to suggest nor imply that some measure of progress was not achieved during the course of the training programmes. On the contrary, it may be said, with justification, that there was a marked difference in the levels of skills of the participants at the end of each training period. This was never more evident than in their tool manipulation, in their more disciplined approach to their work and to the fact that their work content, though limited, was executed to satisfactory standards. Much of the credit for this must go to the experts whose dedication and perseverance, often in the face of difficult and uncomfortable working conditions and lack of adequate support from counterpart organisations, never faltered. Credit is also due to the participants, whose sustained interest and anxiety to learn as much as possible made up to a degree for the shortcomings already referred to. Significantly, it was noted that most progress was made in Medan where the percentage of participants with a background in the industry was greatest. It is probably idle speculation, at this stage, to dwell unduly on what might have

been. Nevertheless, it is hard to escape the conclusion that the opportunity to serve the best interests of a growth industry was, through lack of foresight and informed interest, almost lost.

C. Entrepreneur Training

To quote the Project Document, the immediate objective of the Entrepreneur Training component was " to develop entrepreneurial/managerial capabilities of small-scale rattan producers through training in industrial entrepreneurship orientation, improved small-scale management techniques and marketing skills with a view to develop them as independent producers " (immediate objective 3).

Accordingly, a one week's training programme was carried out in each of the three centres immediately on completion of the instructor training component. Selection of the seventy participants was made initially on the basis of ownership of a rattan workshop and also included those who expressed a particular interest in becoming an owner or, who in the opinion of the experts, demonstrated by their interest and dynamism during the technical training, that they had the potential for such self employment.

The programme itself could best be described as one of starting up and running your own rattan business. It therefore included, in as detailed a manner as possible, consideration of the following basic factors :

1. Before starting up-personal and family considerations ;
2. Establishing the product and the market ;

3. Establishing the price - costing and competitors ;
4. Deciding on identity and structure of the business ;
5. Management and employing people ;
6. Manufacturing requirements ;
7. Preparing financial projections and raising finance ;
8. Keeping books and records ;
9. Marketing and sales ;
10. Professional advice ;
11. Government and institutional assistance ;
12. Preparation of business plan.

For further details please refer to the Rattan Entrepreneur Training manual and to Annex IV which provides information on timetable, topics and speakers.

Documentation provided included the Entrepreneur Training Manual in Bahasa Indonesia, speakers notes, especially on costing and other financial considerations, and the previously distributed technical manuals which include investment considerations in respect of production requirements. A representative of the Bank of Indonesia was in attendance during one session and described current banking services available to the small-scale producer and the credit and loan facilities recently promulgated by the Government of Indonesia to assist in the development of small scale industry generally. Visits were arranged to well-organised export-oriented rattan furniture factories during which the trainee entrepreneurs were given a talk by the manager on the history and development of the enterprise, the problems it faced, especially during the start up

period, and its current product, marketing and manufacturing policies.

Of the 60 rattan entrepreneur participants, only a small fraction, less than 10%, were owners or co-owners of small enterprises. The remainder aspired to this situation sometime in the future and this would obviously depend on the availability of adequate resources, both financial and technical. Their reasonably good educational background enabled them to understand and come to terms with most of the topics discussed but it was obvious that not being owners themselves much of what they learned, since it could not be related to a specific experience or circumstance, except in the case of the workshop owners, tended to be seen in a purely academic light. This was particularly, the case in respect of marketing and finance, both of which require considerable attention in any future training programmes. It is more certain however that the small number of owners did benefit substantially from a course of this nature especially because of its close links with the preceding all-technical training.

D. Plant Visits

In all, ten plant visits were arranged to selected, well-equipped and modern medium-sized rattan furniture plants, all of which were manufacturing solely for export to Europe, Japan and the United States. Six visits occurred during the instructor training programmes, one each for the trainee entrepreneurs and

one in connection with the Jakarta Workshop.

The objectives of the visits, which came towards the end of each training programme, were to expose the participants to the commercial realities of much that had been dealt with in the more protected environment of the training centre, to let them see at first hand how their training related especially to current technical practices in the industry and to enable them to more fully appreciate the concepts of cost consciousness, quality standards and productivity. They were encouraged to ask questions and to seek information from the managements concerned, which invariably were responded to with courtesy and a wealth of detail. Not everything in the plants coincided with the ideals put forward by the experts on aspects such as plant layout, jig design and use of processing equipment but they served as good discussion points during subsequent follow-up discussions. All in all, the visits proved their worth and served to cement in the minds of the participants many aspects which they were meeting for the first time.

E. Jakarta Workshop

This workshop was again convened in response to the objectives of the Project Document and was held in the Wisata Hotel, Jakarta, on the 23 and 24 March, 1990. It was preceded by a rattan plant visit arranged by the DJIK in association with the rattan industry. A total of 25 participants attended, of which 12 came from the industry and the remainder from various government and other interested organisations. Since a high

proportion of participants was drawn from the DJIK itself. the CTA availed of the opportunity to present a review of the completed training programmes along the lines of this report and in the light of this to draw attention to the current status of the industry and to emphasise the need for a more realistic and relevant response to its present and future needs. Details of these and other course topics and timetable are included in Annex V. Documentation included the Instructor Training Manuals, the Entrepreneur Training Manual, notes prepared by individual speakers and slides depicting models and jigs for rattan production.

At the end of the workshop, a session was devoted to a detailed discussion which centred on the role of the DJIK and other state agencies engaged in providing assistance to the small-scale rattan industry. The importance of being able to properly assess the needs of the small-scale sector was stressed as well as the mounting of a realistic and sustained response at local enterprise level. Other matters discussed included further international assistance for the industry, its nature and extent with particular attention to the marketing needs.

F. Marketing

A specific assessment of the marketing needs of the small-scale rattan sector are included in Mr. Ferreros's report. Here, some general comments are called for in order to place marketing and the small-scale producer, with his particular problems and difficulties, into the context of long and short

term development.

There is little point in developing technological and design skills if, at the same time, sufficient attention is not paid to an effective means of responding to consumer needs and preferences in a way that relates to the limitations which are necessarily imposed on workshop production. In the nature of things, these limitations refer, not only, to limited production facilities and skills but also, in most cases, to limited financial resources and usually lack of knowledge of what marketing is all about or, for that matter, lack of knowledge of the markets and their requirements.

There is no question of the producers themselves being able alone to effectively address these problems and assistance should therefore be provided by DJIK, or whatever other organisations are charged with this responsibility. The solutions so far offered, i.e. the intervention of the so called " foster-father " or large-scale exporter collaborating on marketing with the small producer, simply hasn't worked, because in practice, it offers few worthwhile advantages to the latter. He remains an anonymous producer who has little or no control over what he makes, what price he may be paid for it, when he will be paid or how he can better the situation for himself and his business.

Consequently, the first step must be to improve the efficiency of the assisting agency through an introduction to selective agency personnel of modern techniques in marketing management, especially for exports. This, in turn, should be

reflected in improved marketing services to the small-scale sector particularly in trade information related specially to the rattan furniture sector. A library of appropriate books, periodicals and other relevant documentation should be built up together with access to international information on the subject. Probably the most effective manner of achieving this situation would be the holding of a series of two-weeks workshops conducted by an international specialist agency, for the staffs concerned.

The training should then be extended preferably on a selective or pilot basis to a small group of enterprises located conveniently close to each other such as in the cluster workshop arrangement. The work content, at this stage, would have particular reference to competitive activity, design, products supplied, trading terms, pricing, market trends and potential problem areas, criticism etc. A major feature would be a fully detailed statistical breakdown where possible, of the import situation in the target markets in order to indicate to the producers the most attractive areas for future expansion.

A subsequent stage would be the establishment of co-operative marketing activities under the direction of the agency, or the linkage under more closely structured and monitored conditions of the small workshops with selected large scale rattan exporters who are willing to comply with the special conditions and circumstances associated with small-scale producing.

In the context of the current project, a strongly recommended solution would be the mounting of a special pilot training programme for selected small scale rattan furniture producers which would provide an opportunity for the incorporation of all the salient elements of export development for the participants as well as providing guidance to the counterpart agency as to the role it should adopt in carrying out its functions.

In effect, this programme would be an expanded version of the rather more successful entrepreneur training activities carried out in the three training centres and described in chapter C of this report. It would have the following major objectives:

- a) The preparation of detailed individual business plans, leading to the more efficient running of each business;
- b) The development of exportable rattan products;
- c) Familiarisation with and implementation of export marketing requirements;
- d) Elaboration of effective role of counterpart and/or supporting government agency;
- f) Increase in exports from the small-scale sector.

The workshop/small factory, owner/participants would be carefully selected on the basis of their export potential, their ability to absorb the training concepts and willingness to adapt their businesses accordingly. The programme envisages a combined activity of morning or afternoon lectures on the various topics which are then applied immediately at workshop/factory level under the guidance of individual experts. This would apply in particular

to production organisation, product design and development and the establishment of quality standards.

A particular feature of the programme would be the production, on a shared basis, of a range of exportable items of furniture which would be presented to the market-place during a second phase of the programme intended to be devoted to export market orientation. Since it is the function of the local Kanwil, or regional office, of the Ministry of Industry to assist in the development of small scale industry it is logical to assume that it would be the most appropriate counterpart agency and would therefore participate, in an observer status, in the programme. It would act as a liaison with the participating enterprises, the initial selection of which would, however, be the responsibility of the consultants, in consultation with the Kanwil. It is also anticipated that representatives of the local Common Services Centre would also participate in the training programme.

Full details of the programme are included in Chapter I which is concerned with follow-up activities.

G. Development of Common Services Centres (CSC) and Cluster Workshop Counselling

This final component of the project is planned to commence on 01 April 1990 and to end on 30 June 1990. Two UNIDO experts shall be involved, namely Mr. B. Ebrada and Mr. G. Soliano, who will spend one month in each of the centres implementing the follow-up activities concerned with the organisation of the centres and the counselling and training services intended to be offered to the cluster workshops in each locality on a permanent basis.

In anticipation of the carrying out of this work effectively and bearing in mind the difficulties experienced in relation to the instructor training programmes, the CTA held a series of meetings in this connection with the Director of the DJIK and his staff, the senior Kanwils staff in each of the centres and finally, accompanied by Mr. G.L. Narasimhan, UNIDO Country Director, with Mr. Ir. Trisura Suhardi, Director General for Small Industries. The purpose of the meetings was to obtain assurances that the Common Services Centres, which are intended to house the equipment used in the Instructor Training Programmes, would be suitably prepared well in advance of the arrival of the experts so that they could commence their work without delay. Earlier visits by the CTA to the proposed sites indicated that they were far from being ready and much additional work would be needed to be done by the Kanwils if they were to serve the purpose for which they were intended.

Special arrangements were found to be necessary in the case of Ujung Pandang where the centre would not be ready in time for the commencement date of 01 June, 1990. Instead and in agreement with the Head of the BLK Training Centre in Ujung Pandang and the local Kanwil, it was decided that the programme, in this instance, would be carried out at BLK where the equipment would be installed. All other facilities and amenities would be provided there and in the other centres in Solo and Medan in accordance with the following DJIK/Kanwil essential inputs :

1. Permanent Counterpart staff in each location.
2. Suitable building, convenient to cluster workshops.
3. Provision of small office accommodation.
4. Appropriate staffing for administration and production in each centre.
5. Provision of power. (3 phase).
6. Provision of rattan pole straightening, sizing and sanding equipment.
7. Provision of working capital for the purchase of all raw materials.
8. Provision of permanent transport for expert and counterpart consultancy work in cluster workshops and delivery of raw materials.
9. Provision of suitable work benches.

The work programme to be followed is outlined as follows :

1. Organisation and development of CSCs on a sound technical, managerial and commercial footing.
2. Installation, safe use, storage and maintenance of

supplied tools and machines.

3. Development of consultancy work with cluster workshops related to production and marketing.
4. Establishment of training function at CSC.
5. Any other relevant activities.

H. Project assessment to date

Attention has already been drawn in section A 2 of this report to the shortcomings of the participants, especially in relation to their respective backgrounds and experience and to the extent to which each group was dominated by selectees from Government employment. Few if any, even including those coming from the industry could be classified as craftsmen and in the case of Government employees would seldom have little more than a passing acquaintance with the craft and certainly would never have experienced the commercial environment in which the craft should be nurtured and developed. This meant that the programme of training had to be watered down considerably so that appropriate attention to the fundamentals of the craft could be exercised before embarking on the essential technological implications. The project document envisaged the further training of rattan craftsmen which, as has been emphasised, is an all round knowledge of and efficiency in the daily exercise of their craft. Furthermore, it called for the capability of transferring the new levels of craft on a continuing basis to cluster workshops by what are termed rattan training instructors.

Therefore, the immediate end product of the UNIDO Instructor Training Programmes was the emergence of trained instructors in rattan production. For the reasons already referred to, namely, the selection of participants, in the case of all three centres, with either none (Government employees) or little (workshop owners/employees) craft experience proved to be an unsurmountable barrier in achieving this objective especially in a four weeks training exercise. Instead, a considerable amount of time had to be devoted to emphasising the fundamentals of the craft, i.e. hand tool techniques, safe and proper working procedures, basic structural joints etc., so that the opportunity for introducing advanced craft techniques, such as jig design and construction, making of whole pieces of furniture and ensuring the understanding and application of appropriate quality standards, while not neglected, could not be given the attention they required. With few exceptions, the participants gave wholeheartedly and unstintingly of their interest and endeavour, but it is hardly a substitute for what was expected of them in the first instance.

Looking at the the situation as a whole, it may be said that the programme achieved, at worst, a detailed introduction to what up-to-date rattan furniture production is all about and at best provided improved job opportunities for some seeking full-time employment in the industry. However, by no stretch of the imagination could any of the participants be described, at this stage, as rattan instructor craftsmen, much less as craftsmen. Without either a fundamental change in selection criteria or the devotion of considerably more time to the actual training itself,

this objective can never be brought about.

It is apposite, at this stage, to seek to identify the reasons why this important output of the project was not achieved in the manner envisaged. As has already been emphasised, much of the cause must be laid at the feet of the selection criteria used to identify prospective participants. This, in turn, places the responsibility with the counterpart agency, namely DJIK, which carried out the selection process with some, though not much, assistance from the Kanwils.

With hindsight, it is now realised, even by DJIK itself, that it did not have nor does not still have either sufficient knowledge of, or insight into the technical and management needs of the industry, much less its training requirements, to enable it to make a meaningful selection, bearing in mind the longer-term implications, such as the continued dissemination of the craft capability at national industry level. None of its personnel interviewed by the CTA had either a background in or detailed knowledge of the rattan industry and thus would tend to make such decisions on a purely superficial basis. There also appeared to be a policy on the part of DJIK, for whatever reason, to place as many government employees as possible, either from its own ranks or those of the Kanwils, in the training programmes. Most of these were experiencing the industry for the first time and had, moreover, no idea of why they were there or what would subsequently be expected of them. At the same time it must be said that throughout Indonesia there was no shortage of suitably qualified and experienced candidates for a programme of this nature.

DJIK and the Kanwils should, therefore, re-appraise their respective roles in providing support services for the development of such as the rattan furniture industry, with its very considerable potential for export. In doing so, they must acknowledge that a prime requisite is the appointment of personnel who are themselves technically qualified in the trade and therefore, are in a position to assess its strengths and weaknesses and can plan assistance accordingly. In this connection, they must realise that attendance by their administrative personnel at brief appreciation courses concerned with various aspects of the industry are no substitute for the in-depth knowledge of the industry essential to its further development. In fact, such an approach, which now appears to be common-place, has tended to generate a high degree of complacency on the part of DJIK as a whole towards its responsibilities to the industry and this, probably, more than anything else, accounted for its less than satisfactory involvement in the project. As has been emphasised throughout this report, the development of the industry whether at workshop or factory levels, is based on the common requisites of marketing, design, technology and management. DJIK or any other agency purporting to provide technical assistance of whatever nature would do well to ensure that it has this kind of expertise permanently available to it.

Reference has already been made to the inadequacy of funding available from government sources for the project in question. This situation also led to many difficulties especially in arranging for the mounting of the training programmes at each of the three centres and included inadequate pre-briefing of the Kanwils and BLK Training Centres and inordinate delays in

transferring monies due to these organisations to enable them to carry out their functions satisfactorily.

The Project Document itself must also share in the responsibility for this situation. Whilst its overall thrust of upgrading the industry could hardly be faulted, many of its directives were either based on inadequate or faulty information especially on technical matters, or were couched in terms which at best were ambiguous and at worst were open to misinterpretation. This refers, in particular, to its over-ambitious development objectives (c) and vaguely-presented and somewhat contradictory projected inputs (e) from both the Government of Indonesia and UNIDU/UNDP.

The lesson, therefore, to be learned is that a nation-wide project of this nature needs to be thoroughly researched and thought-through before actual implementation. Neither architects of the Project Document, namely UNIDO/UNDP and DJIK, displayed in its clauses a full recognition of all its implications and this was reflected in inadequate and vaguely-worded detail regarding equipment and personnel. Furthermore, the functions to be exercised by the counterpart agency were not spelled out in sufficient detail and it is suggested that had that been so, might have resulted in the choice of a more appropriate agency or certainly a more efficient response from the chosen agency.

At all events, it is now clear that the UNIDO experts should have been involved in the participant selection process and had this been so, would have obviated the most glaring inadequacies in the Project. More attention should also have been paid to the consultants report which preceded the preparation of the Project

Document and which clearly underlined the shortcomings in the industry and how best they could be addressed.

The entrepreneur training programmes fared somewhat better because the emphasis was on the marketing and management implications of workshop production. The selected participants, having had the advantage of a comprehensive introduction to the craft during the previous four weeks were better fitted to deal with the complexities of management generally, but still found great difficulty in coping with the notions of finance and marketing. Exceptions were those with an ownership background who could cite their own experiences but regrettably, they too were also few in number.

At the end of the programmes, the participants were invited to complete the UNIDO Group Training Programme evaluation forms. These were subsequently collated and the findings are include in Annex VI.

I. Follow-up Action

The immediate follow-up action to the completed technical training programmes shall be the provision of assistance in equipping, organising and developing the Common Services Centres and establishing a good working relationship between the CSCs and the various cluster workshops, as described in chapter G of this report. This is currently being undertaken by two of the UNIDO Consultants and shall be the subject of a further report on its completion at the end of June, 1990.

Meanwhile, it is relevant to look at the longer-term implications of industrial training and development in the small-

scale sector of the rattan furniture industry. It should be remembered that by the standards of the major rattan furniture exporting countries such as the Philippines, Singapore and Taiwan, the industry in Indonesia is still very much at the embryonic stage. Until relatively recently, Indonesia was known mainly as an exporter of rattan poles and in fact, accounted for more than 90% of the world's supply of this material. Then in July 1988, the Government of Indonesia imposed a total ban on the export of raw rattan in order to develop the manufacturing sector of the industry and as a result, to increase value-added and exports of finished goods. Since then, there has been a phenomenal growth in the establishment of rattan furniture manufacturing enterprises, instigated mainly by entrepreneurs and new entrants to the industry who rightly foresee the possibility of sharing profitably in what is, undoubtedly, a rapidly growing export business. Unfortunately, however, this growth in the number of manufacturing units has not been matched by an increase in technical and management capability within the industry as a whole or the units concerned. Most of their products are copyist in nature and lack the characteristics of design and quality which would enable them to be sold on factors other than price. Very few companies have experience of marketing or export requirements and tend as a result to be unfairly exploited by unscrupulous exporters who play off one enterprise against another in order to buy at the lowest possible price. The result is that many companies, having invested heavily in manufacturing facilities are, not only, not earning a realistic return on their investment but are also experiencing increasingly serious financial difficulties. This situation may best be

appreciated by comparison with the Philippines, a major exporter of well designed quality rattan furniture. In Indonesia, the current average F.O.B. value of a 40 foot container of rattan furniture is about U.S. dollars 9,000, whereas a similar container, F.O.B. the Philippines, has an average value of twice that figure. The extent of the value-added difference is accounted for mainly by product design, quality and higher productivity and by implication, production and marketing management. In any event, two years is much too short a period to have acquired the expertise of craft skills and management capability which are the hallmarks of success in this business, even if every effort had been made to acquire these desiderata. So far there is little evidence to suggest that appropriate emphasis has been placed on such training and hence the importance of projects such as the one under review.

There is no doubt that the desired improvement in the performance of the rattan industry can only come about by comprehensive and sustained training by those charged with this responsibility, who themselves fully appreciate the nature and extent of such training as well as its direct relevance to the immediate and long-term needs of the industry which are further heightened by its considerable export potential. Otherwise, as has happened so far in the current programme, much of the effort instead of being immediately effective will require to be diluted and scarce resources unnecessarily wasted.

The opportunity remains, however, to redress the situation even in the context of the current project which, if properly structured, would do much to alleviate the shortcomings referred

to especially in relation to small-scale industry improvement and more effective counterpart contribution, as well as providing guidelines for such Ministries as Manpower and Industry, both of which have a vested interest in well structured industrial training and development.

The recommendation is for the mounting of a short-term pilot training project for a number of selected small-scale enterprises which would have as its major objective the achievement of worthwhile export penetration and in so doing, would incorporate all the essential elements of design, technology, marketing and management already referred to. The following are the major elements of the proposed programme which would be the final follow-up activity of the project.

Title: Integrated management and export marketing pilot training programme for small-scale rattan furniture producers.

Phase I: Intensive workshop training and field counselling. This would be an expanded version of the previous entrepreneur training programme to include:

- export marketing requirements.
- export documentation procedures.
- co-operative export marketing activities (sub-contracting, fostering, linkage).
- product design and development.
- costing and pricing for export.
- factory/workshop organisation.

- quality standards and productivity.
- financial management.
- preparation of detailed business plans.
- promotional literature.
- concurrent lectures, demonstrations and practical applications at individual participant workshop level.

Duration: 4 weeks.

Location: Surabaya (because of its concentration of small, medium and large-scale producers).

Participants: Maximum of 15 selected small and medium-scale rattan producers with export potential located within commuting distance.

Consultants:

- Rattan industry management specialist and team leader (Cody or similar).
- Rattan export marketing specialist (Ferreros).
- Rattan technician (Borromeo).
- Rattan furniture designer (K. Wiyoso).

Requirements:

- Venue and facilities
- Visual aids
- Documentation (training manuals, notes)
- Local transport for counselling.

Note:

The only expenditure envisaged other than for personnel and above would be the provision of a range of rattan export designs.

Estimated cost: U.S.\$ 15 - 20,000.

The designs would be executed by an established international furniture designer in accordance with European and United States marketing requirements. The design brief, which would incorporate an integrated range of high quality rattan and wicker items would be prepared by the team leader and would be made available to the project on the basis of a detailed specification and complete full-size working drawings. These would then be used for supervised and guided product development and initial market penetration.

Outputs:

Exportable rattan products.

Efficient management of all resources.

Awareness of export requirements.

Better quality and productivity.

Familiarity with correct export procedures.

Establishment of comprehensive business plan.

Increased profitability.

Phase II: Export marketing and production orientation training.

Organisation of fact-finding study mission to the United States and selected European countries for selected participants who have successfully completed Phase I. The study-tour would have the following major objectives:

- To gain first hand experience of rattan furniture markets and their specific requirements by attendance at appropriate trade fairs.
- To study the latest techniques in workshop and factory planning, production technology and quality standards by visiting well organised and highly productive plants similar in size and scope to those of the participants;
- To gain up-to-date knowledge of materials and equipment used in rattan furniture production;
- To present suitable items of rattan furniture made by the participating enterprises to prospective customers;
- To study industrial training and other relevant activities associated with the furniture industry.
- To establish links with potential importers leading to continued export activities.
- To follow up personal market contacts.

Duration: Two weeks in each of U.S. and Europe.

Participants: Six selected entrepreneurs for each of Europe and the U.S.

Consultants: Team-leader / Europe
Team-leader / U.S.

Commencement: Phase I September, 1990
Phase II October, 1990.

Suggested Counterpart Agency: The local Kanwil of the Ministry of Industry in Surabaya, whose function would be mainly that of liaison with the participants and collaboration with the UNIDO team in providing support services at local level.

Provision should also be made for attendance by an observer from the Ministry of Manpower.

A special one-day workshop should be held at the end of above programme to acquaint larger companies in the area with the outcome of the programme and to explore possibilities for long-term future production and marketing collaboration which would be to their mutual benefit.

III. Summary of major conclusions and recommendations

A. Conclusions

1. The small-scale sector of the rattan industry in Indonesia is still very much at a development stage.
2. If given the proper assistance and support it can become a major employer in its own right and contribute substantially towards export success in the industry.
3. It can also become a major source for essential craft skills for the large scale sector where the demands of high output permit of only specialist expertise.
4. The skills referred to are those of the all round craftsman who, in time and because of his in-depth knowledge of all aspects of the industry can become a rattan technician, a level badly needed in the industry's development programme.
5. The rattan technician's main function is to bridge the gap between the design and marketing functions and actual production by translating the former by means of product development into feasible production.
6. This cannot be achieved without a sound craft foundation.
7. An essential element in the development of the craftsman is effective and sustained training in his craft.
8. The training should not be of a specialist nature but should deal with every aspect of his craft, both theoretical and practical.
9. It, therefore, differs substantially from that required

by the semi-skilled worker who practices few skills and which can be learned relatively quickly.

10. The semi-skilled rattan worker is usually found in large scale rattan production where training is informal, if at all.
11. Training is the joint responsibility of the industry and the appropriate government authority charged with that function.
12. In the rattan craftsman training programme currently under review, the Ministry of Industry through its Directorate General for Small-Scale Industry (DJIK) and its Regional Offices, or Kanwils, undertook this responsibility with DJIK acting as counterpart agency.
13. This was a role it could not adequately fulfill through a combination of a lack of detailed information concerning the real needs of the industry, staff inexperienced and unqualified to appreciate, much less deal with the rattan industry training requirements and a lack of adequate budgetary resources.
14. This resulted, primarily, in the selection of participants with neither the background nor the experience to undergo a course of this nature, which had as its main objective the production of rattan craftsmen instructors
15. Most (over 60 %), came from government employment and the remainder, though some claimed industrial experience, would quality, at best, as unskilled workers.
16. The nett outcome was the conduction of a training programme far below that envisaged in the Project

Document.

17. No doubt, most participants benefitted personally from the programme but its contribution to the welfare and development of the industry as a whole must remain highly questionable.
18. The Entrepreneur Training Programmes which followed immediately after the technical training could be considered more successful.
19. Though the number of participants actually owning enterprises was still small, their previous technical induction was helpful in putting across matters concerning the successful running of their respective businesses.
20. Greatest difficulty arose in understanding the financial and marketing implications.

B. Recommendations

1. Small-scale rattan enterprises have their own ethos in respect of marketing, design, production and finance which should be regarded as separate and different from large scale manufacturing.
2. It is particularly so with regard to industrial training and this should be seriously taken account of by those responsible for that training.
3. Since industrial training of any consequence is based on clearly identified needs, these should be established and taken account of before the commencement of any training programme.

4. The greatest single need for the small-scale producer is the continued availability of rattan craftsmen who should be trained to exercise all of the wide range of skills required by their craft.
5. This should enable the small producer to compete effectively on export markets especially in offering a more exclusive product.
6. The training should also take account of the need for resourcefulness on the part of the small producer since his access to production facilities is usually very limited.
7. The training itself should be undertaken only by a competent training authority which has the expertise in and knowledge of small scale rattan production for export. This is, more correctly, the Ministry of Manpower.
8. Most emphasis should initially be placed on the development of technical expertise and it should be recognised that the training of rattan craftsmen is a matter of years rather than months.
9. Since the rattan craftsman is unlikely to become a designer, - this takes at least four years training at a recognised Design University- his training in design should be confined to draughting competency and the ability to interpret working drawings.
10. Prospective small-scale rattan furniture producers should be discouraged from so doing unless and until they have, at least, achieved craft capability.

11. There should be special series of courses organised for existing producers and entrepreneurs in starting up and running " your own rattan business " .
12. Particular emphasis should be placed on export marketing for the small scale producer whether as part of a co-operative or linked with a large-scale exporter.
13. In either case the role of the small producer and how it might be developed and protected should be given paramount attention.
14. Finance, whether for investment or as working capital, is always a problem for the small producer. Special two-day courses should be organised regionally to train small producers to understand the financial and administrative implications of their businesses. Local banking institutions should be encouraged to participate in these courses and give of their expertise with regard to banking matters.
15. Since the Common Services Centres need to be commercially viable in order to survive, they should be handed over to small-scale industry as soon as possible.
16. The DJIK should, however, continue to play a monitoring role particularly with regard to cluster counselling in finance and administration. It should expand its expertise in these fields.
17. It should also work more closely with the Ministry of Manpower in furthering the development of the small-scale rattan sector, not only at national level but more importantly, through the Kanwils and the Regional BLK

Training Centres.

18. Should future international assistance be contemplated, it should concentrate on longer term technical training on a pilot basis and thus act as a guide-post for more widespread training throughout Indonesia.