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18512

PROJECT FORMULATION FRAMEWORK

Country India
Project No. DP/IND/88/053
Proposed Title Metals and Plastics Industries Service and Training Centre, Goa(earlier title Tool Room & Training Centre)
Estimated duration 4 years
Tentative UNDP US \$ 2,000,000 + Cost sharing
Estimated counterpart cost Rs. 48,000,000
Sources of funds IPF

A. Development Problem(s) intended to be addressed by proposed project

1. At Sectoral or subsector level (the "macro" level)

Industrial Development in the State of Goa is beset with a number of problems. The industrial Culture was introduced in the state in seventies i.e. with a time-lag from the rest of the country. The State Government has set-up a number of industrial estates dispersed over the State and provided infrastructure like Power Supply and Water Supply and Constructed Sheds to be used by the industry, mostly in the Small Scale Sector in the Private Sector. Thus a large number of Small Scale Industries and some Medium Scale Industries have come-up over these years. However, the industry in general and small scale industries in particular have always been dependent for their various Metal and Plastic Industries facilities and other technological infrastructural necessities on cities like Bombay, Bangalore, etc. which are located at a distance. Local non-availability of this basic technological infrastructure and skills in tool design/making have resulted in an overall stunted growth of this sector. This has as a consequence affected the generation of employment, consistent quality of products and export potential. The industry, especially the small scale units mostly in the Private Sector which has a natural tendency to be dependent on technological advances at an exponentially increasing frequency, therefore, is finding difficulties in surviving primarily due to non availability of this basic institutional infrastructural facilities and as a consequence some sickness has been observed in this sector.

7/1

It has been recognized that availability of a basic infrastructural facility in the form of a Metal and Plastic Industries Services and Training Centre is vital for the survival and development of industry in the region. more so far the small scale industries which are mostly in the Private Sector, both to get an increasing share in the home market and for enhanced exports.

2. At level subject to solution by the proposed project itself (the "micro" level

A sample survey of about 257 industrial units in various estates spread out in the state was carried out, the basic details of which are as follows:

<u>Sector</u>	<u>No. of units</u>	<u>No. of employees</u>		<u>Total turnover in</u>
		<u>Male</u>	<u>Females</u>	<u>in 1989(Rs. in million())</u>
General Engineering	170	1300	125	80.00
Plastic Component Moulding units	35	275	200	50.00
Die Casting Component unit	5	70	15	30.00
electronics	47	100	300	100.00
Total	257	1845	540	260.00

On the basis of the survey it was noted that productivity per employee is rather low. The survey also revealed that 95% of industrial units are small scale units run by private entrepreneurs. Based on interactions with the representatives from the small scale industry, Goa Chamber of commerce and Industries and other concerned parties the problems being faced by them have been identified as follows:

1. Dependence on facilities located at distant places is resulting in avoidable delays and constraints exist with regard to identification and timely changes in product mix. This results in slow or even negative growth and consequent industrial sickness.
2. Paucity of skills and capacity for even a basic task as tool maintenance.
3. Arranging for tools replacement and quality testing is a difficult and time consuming process. This results

in poor quality of product and higher rate of rejection at shopfloor level in the industry.

4. Non availability of Tool and Die Makers at the local level and difficulty in attracting skilled persons from other states for employment due to socio economic problem.

An analysis of causes and evidence of the industrial problems have been made as follows:

Causes

Evidence

- | | |
|---|--|
| 1. Lack of adequate institutional facilities. | Low productivity |
| 2. Lack of standardization | Non interchangeability of parts and components |
| 3. Unsatisfactory quality and reliability | i) Failure to compete at national level
ii) Poor exports |
| 4.i) Workers not fully trained | i) Lower output and productivity |
| ii) Lack of appropriate tooling facilities | ii) Heavy rejection at the shop floor
iii) Reluctance of entrepreneur to set up new units or expanding the existing ones. |

B. Concerned Parties/Target Beneficiaries

1. Who has identified the development Problems and how has it come to the attention of UNDP ?

The State Government has set up two corporations namely Goa Daman & diu Industrial Development Corporation (GDDIDC) and Economic Development Corporation (EDC) with the aim of providing the necessary infrastructure for accelerating the growth of industry. GDDIDC and EDC have identified the need for the project. The Government of Goa has been making sustained efforts over the years to obtain financial and technical assistance. Recognizing the need to have an independent apparatus for the developmental activities of setting up a Metal and Plastic Industries Service and Training Centre in Goa, a Government society has been formed in the year 1988 to pursue this project further.

2. What particular group or groups are intended to benefit from the solution of the development problem identified above at item A.2 (e.g. the target beneficiaries) if appropriate. Indicate the breakdown of the group(s) gender.

1. The industry in the state of Goa and in the border districts of Maharashtra/Karnataka.
2. Group of technicians and engineers (including women) from the industry receiving training through the Training Cell of the project.
3. Designers and users of professional equipment and products.

C. Pre-project and end of project status

Describe in terms which are as objective and quantifiable as possible.

1. The present pre-project situation

- 1) Non availability of institutional infrastructural facilities for the industry
- 2) Slow growth rate of Industry and poor exports
- 3) Non-availability of trained technicians
- 4) Most of the units, essentially small scale units have no formal organization set up.

2. The situation expected at the end of the proposed project

It is expected that the proposed Centre will have capabilities to serve the industry in the region with the following institutional infrastructural facilities:-

- 1) Consultancy Services to the industry to effect methods improvements.
- 2) Training of technicians and engineers from the industry for short term training courses.
- 3) Long term training courses in tool making/tool design.
- 4) Inspection and testing of mechanical components and parts from industry
- 5) Design and fabrication of precision tools, dies, jigs and fixtures.
- 6) Data Bank and library

With the availability of the proposed services to the industry, the following change in situation is expected:-

- i) Improved production methods and facilities thereby leading to improvement in productivity, consistent quality with less rejection.
- ii) Availability of more numbers of skilled operators, tool and die makers/designers.
- iii) More companies with improved formal organization set up and important companies sub-systems introduced so that a basis for continuous development is provided.

iv) More companies attracted to set up industrial units in the region because of availability of trained manpower, common services, consultancy services, implementation assistance and relevant information of manufacturing technology, etc.

D. Special Consideration

The project will greatly help the private sector of small scale units in the region which is industrially backward and which lacks in an institutional set up in the areas of consultancy and technology upgradation. The project will help the industries in the light engineering sector which employ women in a large number. As is evident from the sample survey, almost one fifth of the employees are women and the project will facilitate improvement of working skills of women and also promote women entrepreneurship. It is hoped that the employment of women could go up from the present 20% to 30% towards the end of project duration. This project will also help establishment of an electronic city proposed in the region.

E. Other donors, programmes active in the same subsector

There are no other donor programmes in the same sub sector for the region. Project activities will be coordinated with other ongoing or completed UNDP assisted projects in the same sub sector.

F. Development Objectives and its relation to the country programme

Government of India has identified the promotion of small scale and agro based industries and enhancing their contribution to exports as a thrust area.

The development objective is to improve the quality and reliability of products, especially from the Small Scale Industries sector, thereby facilitating increase in exports and to enhance the volume and value of Industrial Production.

G. Major elements

The following are the immediate objectives.

Immediate Objective-I

To set up training facilities for both the present employees and for new technicians and to set up consultancy services to advise the industry in the region at the Metals and Plastics Industries Service and Training Centre, Goa.

This objective would be considered as successfully implemented, when the following outputs are established and made available.

<u>Output</u>	<u>Activities</u>	<u>Party responsible</u>
Setting up facilities for Training in tool and die Making	1.1 Assignment of National Staff	State govt. society
	1.2 Positioning Training Advisor	ILO
	1.3 CTA's mission	UNIDO
	1.4 Drawing up the syllabus	State govt. society
	1.5 Approval of the syllabus & identifying the examination agency	-do-
	1.6 Procurement of Plant and Machinery & training on Equipment	ILO/Govt.
	1.7 Fellowship training	ILO
	1.8 Construction of the bldg.	State Govt. Soc
	1.9 Commencement of the courses.	-do-
Organize short term training courses	2.1 Interact with the industry & identify the requirements	State Govt. Soc.
	2.2 Preparation of the training material for the course	-do-
	2.3 Commencement	-do-
Establishment of consultancy cell	3.1 Assignment of National staff	State Government
	3.2 Chief Tech. Adviser (CTA)	UNIDO
	3.3 Study Tour	UNIDO
	3.4 Fellowship training	UNIDO
	3.5 Experts/Consultants Mission	UNIDO
	3.6 Procurement equipment	State Govt. Society

Immediate Objective-II

To set up Testing/Standard Room facilities and to undertake design and fabrication of high precision jigs, fixtures, press tools, moulding tools etc.

This objective would be considered as successfully implemented, when the following outputs are established and made available.

<u>Output</u>	<u>Activities</u>	<u>Party Responsible</u>
Setting up test quality control & standard room	1.1 Assignment of National Staff	State Govt. Society
	1.2 Procurement of equipment	UNIDO/State
	1.3 Fellowship training	Government Society

	1.4 Setting up of the	State Government Society
Establishment of Tool design and fabrication facilities	2.1 Assignment of National Staff	State Govt. Society
	2.2 Construction of the Building	State Govt. Society
	2.3 Procurement of Plant and Machinery	UNIDO/State Govt. Soc.
	2.4 Installation of eqp. as per layout, commissioning of plant and machinery setting up work shop facilities as envisaged.	State Govt. Society
	2.5 Experts/Consultants	UNIDO
	2.6 Fellowship training	State Govt. Society
	2.7 Setting up Design Cell to design tools	-do-
	2.8 Production of Tools, jigs and fixtures.	-do-
Data Bank and library facilities	3.1 Procurement of books technical publications/catalogues, national & international standards reports periodicals, technical films, etc.	UNIDO State Govt. Society
	3.2 Preparation of inf. and handouts for circulation to industry.	UNIDO State Govt. Society

H. Project Strategy

1. Direct beneficiaries

The direct beneficiaries of the outputs of the project are the project staff and those Metal and Plastic Industries which derive direct benefits from the project.

2. The target beneficiaries and the direct recipients of the project are not likely to be the same. Describe how the benefit proposed to be delivered to the direct recipients will lead to the benefits intended for the target beneficiaries

The proposed project is a basic infrastructure which would act as a catalyst and nucleus for assistance to Metal and Plastic Industries. It would help the industry in the region to improve their methods of production and hence improve the quality and reduce the cost of production. By training manpower and by offering consultancy and product improvement facilities, the Centre will impart benefits to the nearly 1000 small scale units in the private sector in the area.

3. Implementation arrangement

The project will be implemented by the Society set up by the State Government of Goa. It has a Governing Council chaired by the Secretary (Industries) Goa and will have representatives from the Government of Goa, Development Commissioner for Small Scale Industries, Government of India, User Associations and Industry representatives from the region, and representatives of UNDP/UNIDO/ILO. The project team would be formed by drawing specialists from the State Government and by fresh recruitment.

4. Identify any alternative project strategies and/or implementation arrangements which have been considered, and why they have been rejected in favour of the one(s) chosen

The proposed facilities, primarily for the small scale sector industry mostly in the private sector is of sophisticated nature and the expertise required for such a facilities is not available in the country. Such a facility requiring an advanced level of expertise in different areas can be set up under a bilateral arrangement, limiting it to one country/source. Thus, assistance will be particularly beneficial in view of the following:

- 1) Location of foreign experts in the project is a difficult job without the assistance of an international organization like UNDP/UNIDO/ILO, who maintain updated roaster of experts from worldover.
- 2) UNDP/UNIDO/ILO will be in a better position to arrange fellowship training of national staff abroad, in view of their wide contacts and experience in executing various projects.
- 3) Since the project involves substantial amount of imported equipment, UNDP/UNIDO expertise and experience in the area will be of great hei, in procurement of the said equipment within stipulated time frame.

I. Host country commitment

The host country/state Government of Goa commitments include provision of:

1. Land and Building(plot already earmarked at Kundaim Industrial Estate);
2. Procurement of indigenous machinery
3. Recurring expenses for the target period of four years (including provision for staff)

J. Risks

The risk level for the indigenous contribution is very low. However, organizing fellowship and deploying of experts may need to be closely monitored by ILO. The equipment supply may also require monitoring at UNIDO.

K. Inputs

	<u>National Inputs</u> <u>(Rupees)</u>	<u>External</u> <u>US Dollars</u>
Personnel	16,052,000	552,000 (93 mm)
Subcontract	-	-
Training	-	415,000 (3 ST and 78 F/S)
Equipment	16,460,000	1,000,000
Premises(Land & Bldg)	15,000,000	-
Miscellaneous	488,000	33,000
Total	48,000,000	2,000,000

2. Comments on any proposed inputs which may raise policy issues on which headquarters guidance is sought, e.g. high equipment components, payment of local and recruitment costs, incentive payment.

No.

Person(s) primarily responsible for this formulation framework:

Direcotr(Industries)
Government of Goa
Panaji, Goa

PROJECT BUDGET COVERING UNDP INPUTS
(in US Dollars)

Country India
Project No. IND/88/053
Title Metals and Plastics Service & Training Centre, Goa

Component	Total		1990		1991		1992		1993		1994	
	m	\$	mm	\$	mm	\$	mm	\$	mm	\$	mm	\$
11-01 CTA	19	190,000	1	10,000	6	60,000	4	40,000	4	40,000	4	40,000
11-02 Tool & Die Prod.	8	80,000	-	-	2	20,000	2	20,000	2	20,000	2	20,000
11-03 Training	6	60,000	-	-	3	30,000	-	-	3	30,000	-	-
11-04 Ind.Eng.	6	60,000	-	-	3	30,000	-	-	3	30,000	-	-
International Cons.												
Tool Room & Fab.	24	60,000	-	-	-	-	6	15,000	12	30,000	6	15,000
Tool Design	30	75,000	-	-	3	7,500	12	30,000	12	30,000	3	7,500
15. Other Cost		14,000		150		1,700		3,600		5,400		3,150
16. Mission Cost		13,000		-		-		8,000		-		5,000
19. Comp. Total	93	552,000	1	10,150	17	149,200	24	116,600	36	185,400	15	90,650
30. Training												
31. S. Tour(3)		25,000		-		16,000		-		9,000		-
32. Fellowships(78mm)		390,000		-		120,000		125,000		120,000		25,000
39. Comp. Total		415,000		-		136,000		125,000		129,000		25,000
40. Equipment												
41. Expendable Eq.		45,000		-		20,000		-		25,000		-
42. Non Exp. Eq.		955,000		-		200,000		201,000		654,000		-
49. Comp. Total		1,000,000		-		220,000		201,000		579,000		-
50. Misc.												
51. Misc.		33,000		1,000		8,000		8,000		8,000		8,000
59. Comp. Total		33,000		1,000		8,000		8,000		8,000		8,000
99. Total		2,000,000		11,150		513,200		450,600		901,400		123,650

LIST OF EQUIPMENT TO BE PROCURED WITH UNDP FUNDS

<u>DESCRIPTION</u>	<u>MAKE</u>	<u>QTY.</u>	<u>APPROX. COST</u>
<u>Design Facilities</u>			
3D CAD/CAM system	Deckel, FAG or equivalent	1	200,000
<u>Test & Quality Control Facilities</u>			
Profile Projector	Mitutoyo, Zeiss or Nikon or equivalent	1	10,000
Height Master	-do-	1	10,000
Tool Maker microscope	-do-	1	10,000
Digital Rockwell and vickers hardness test machines	-do-	2	35,000
Measuring instruments like optical flats, parallels and rotary tables, granite, vernier Callipers, micro- meters, height gauge, bore gauge, etc.	-do-	1 set	12,000
			<u>Sub Total: 77,000</u>
<u>Training Facilities</u>			
Pneumatic Experiment set, Electro Pneumatic Experiment set, Multi-measuring Instruments			14,000
Teaching aids: audio visual apparatus	Set teaching aid/Engg. Drawing		3,000
	Set teaching aid/machine tools		5,000
	Set teaching aids/basic skills		3,000
	Set teaching tool & die		

CNC-Training Section

CNC-Programming	1	17,000
Set		2,000
Key Boards		1,000
Printer		
Overhead		
Projector		
with monitor		3,000
projection		
Simulation	1	15,000
Machine		1,000
Set of tools		

Hydraulic Training Section

Hydraulic		
Experimental		
sets	4	
Electro-		
Hydraulic		
Experimental		
sets	4	
Laboratory		57,000
table with		
Experiment		
plate	4	
Overhead		
projector with		
trolley	1	

Sub Total: 124,000

Development & Fabrication Facilities

CNC Milling machine with digitising head with D-11 CNC system and other standard accessories and copy milling attachment.	Deckel FRG or Equivalent	1	137,000 +25,000
2. CNC wire cut m/c	-do	1	137,000
3. CNC Jig boring machine with jig grinding attachments.	-do-	1	145,000
4. Optical profile grinding machine	-do-	1	100,000
5. Tools	-do-	set	10,000

Sub Total: 554,000

NOTE: TO OBTAIN THE LATEST QUOTES. AFTER TAKING INTO ACCOUNT THE ESCALATION AND TRANSPORTATION FOR UNDP NORMS AND IF THE BUDGET IS EXCEEDING THE LIMIT// THEN WE WOULD DROP THIS EQUIPMENT VIZ. CNC MILLING M/C. ** /OF ABOUT US \$ 1. MILLION

UNITED NATIONS
DEVELOPMENT PROGRAMME



संयुक्त राष्ट्र
विकास कार्यक्रम

TELEX : 31 61652 UNDP-IN
CABLES : UNDEVPRO-NEW DELHI
TELEPHONE : 690410

55, LODI ESTATE
NEW DELHI-110003
INDIA

FAX NO. 91-11-697498
POST BOX NO. 3059
NEW DELHI -110003

13 JUN 1990
Mr. Tandon
Mr. Kulkarni
E/UNT 21/6
25/4.16
RECEIVED
3553
19 JUN 1990
14 June 1990
AREA PROGRAMMES

Reference :

IND/88/053

Dear Mr. Patten,

IND
IND/88/053-Metals and Plastics Industries
Service and Training Centre,Goa

1. The following documents concerning the above project proposal are attached for Headquarters' consideration of approval and delegation of authority:

- 1) Project Formulation Framework alongwith budget, and list of equipment;
- 2) Project Brief prepared for the Field Office PAC held on 11 June 1990
- 3) Field office PAC Minutes
- 4) Draft AC Brief for RBAP consideration (also sent to you by E-Mail)

Please see my letter of 14 June 1990 on the Cryogenic Project in which we have referred in more detail to your proposed use of some of the above materials as well as a copy of a general internal memorandum (copy attached) on the subject.

2. This project proposal has been posed for UNDP assistance recognizing the need for availability of infrastructural facilities vital for the survival and development of industry particularly the small scale industry, the remote sector. The problems of the small scale sector in the Goa region are as follows:

Mr. A.Patten
Chief, Division II
UNDP, RBAP
New York

Consultant: Mr. Dharam GUPTA
Backup off. Mr. Kulkarni IAD, AREA/AT

ATTACHED



- (1) the lack of necessary skills and knowledge;
- (2) lack of experience with regard to updated organization and systems
- (3) non-availability of adequate precision tooling facilities, appropriate training facilities for skilled craftsmen and production staff, up-to-date information on manufacturing technology, and
- (4) non-availability of a facility with the expertise to identify and then assist in solving problems.

3. It may be noted that the New Industrial Policy announced by the Government of India on 31 May 1990 (copy attached) stresses the need for setting up a number of technology centres and tool rooms with a view to improving the competitiveness of the products manufactured in the small scale sector. The project proposal is also in line with the statements made in the Approach Paper for the Eighth Plan (Please see attached summary prepared by Mrs. H. Qubein) that competitiveness of the Indian industry is to be increased by providing access to relevant technology, equipment and materials and particular emphasis on small scale industry and generation of new employment opportunities. Taking into account the report of the joint UNIDO/ILO mission, the project was appraised in detail and discussions were held in our PAC (Please see attached Minutes)

4. The project was officially proposed for UNIDO execution by the Government (Please see para 2,10 of the attached minutes of the UNDP/Delhi PAC meeting). However, considering the expertise of ILO also in the field, ILO was associated alongwith UNIDO at the project review mission stage and it is my recommendation that they jointly execute the project, pursuant to a Memorandum of Understanding, as is explained in more detail in the attached minutes.

5. It is also my assessment that this project definitely is not an appropriate candidate for National execution since the counterpart is part of a small state set up and among other things, they have so far had no international technical contacts nor international contracts experience. Perhaps in the long term future we would have a separate GOI unit established to execute such projects for nascent entities - but that will take much more time to analyse, agree upon with DEA and then establish. This project cannot wait that long.

6. We are copying this letter to both UNIDO, Vienna and ILO, Geneva.



7. We will continue to develop the counterpart preparedness to start implementation of the project so that as soon as delegation of approval authority is received, project activities can commence this year. Based on a re-assessment the project duration is now reduced to 4 years from 5 years.

8. Accordingly, I recommend the early approval of this Project which is directly in line with our CP-IV objectives and which can contribute significantly to employment generation in the specific geographical area of Goa - in other words, a good endeavour which can lead to due credit being given to ILO, UNIDO and UNDP.

With regards,

Yours sincerely,

A handwritten signature in dark ink, appearing to read "Henry J. Nardi".

Henry J. Nardi
Resident Representative a.i.

cc: Mr. NN Tandon, UNIDO, Vienna
cc: Mr. George Kanawaty, Training Branch, ILO, Geneva