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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANISATION

TRAINING SEMINAR  
IN INVESTMENT PROJECTS' PREPARATION, APPRAISAL  
AND APPLICATION OF COMFAR III Expert

**U N I D O / U N D P**

TIRANA

ALBANIA

13-31 January 1997

**F I N A L R E P O R T**

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\* This report has not been cleared with UNIDO and may not therefore necessarily represent the views of this Organisation.

## **I. PROJECT BACKGROUND.**

Training Seminar on Investment Project Preparation, Appraisal and Application of COMFAR III Expert was jointly organised by UNIDO and UNDP at the request of the Department of Economic Development and Foreign Aid Co-ordination, Council of Ministers, Albania, between 13 and 31 January 1997.

### **I.1. Objective.**

The main objective of the Seminar was to develop and/or upgrade the skills of the group of participants from the governmental and related institutions, who are or will be involved in the process of preparation and appraisal of investment projects, in the UNIDO methodology and techniques of investment projects' preparation and appraising their financial and economic feasibility.

### **I.2. Location.**

The Workshop was held in Tirana at the premises of the Mining and Processing Technology Institute.

### **I.3. Facilities.**

Training facilities were provided by the organising institution, including seven personal computers, overhead projector, whiteboard, flipcharts and photocopying services.

COMFAR III Expert software has been loaded on all computers by the participants prior to commencement of the exercises and case studies. Efficient logistic support was arranged by the Organisers, including transport, computer technical assistance and organisation of the meetings with representatives of the relevant institutions.

## **II. DESCRIPTION OF THE SEMINAR.**

### **II.1. Seminar Preparations.**

Prior to the commencement of the Workshop the Consultant has been thoroughly briefed by the backstopping officer on the overall objective of the Workshop. Detailed content and schedule of the activities was also discussed in-depth prior to the beginning of the mission.

Selection of the additional training materials was also discussed in detail prior to the commencement of the mission. The materials were further photocopied in Tirana.

The programme and timetable are appended in Annex 1.

### **II.2. Seminar's Content.**

The program of the Seminar was originally designed to comprise four sessions daily, five days a week for the duration of three weeks. Due to the heavy office workload of majority of participants the Seminar activities (at the organisers' request) had to be conducted in the afternoon hours, commencing during the 1-st week at 16.00 and in the subsequent weeks at 13.30. The daily workload had therefore to be reduced to 3.5 - 4.0 contact hours with one short break in the middle.

The following main topics were covered in the course of the Workshop:

**UNIDO Approach to Project Preparation and Appraisal:**

Macro-economic context of investment decisions,  
 Project development cycle,  
 Project identification,  
 Concepts of project's viability,  
 Structure of the feasibility study,  
 Reasons for investment projects' failures.

**Time Value of Money:**

Compounding and discounting principles,  
 Discounted cashflow concept.

**Market Analysis:**

Basic elements of the market study,  
 Specification of necessary data inputs,  
 Data sources and methods of collection and processing.  
 Basic elements of marketing strategy,  
 Selected methods and problems of demand and sales forecasting.  
 Inputs; parameters' identification and forecasting,  
 Elements of export marketing,  
 Relationships between market projections and other stages of pre-investment study.

**Technical Analysis:**

Raw materials and supplies,  
 Location and site,  
 Engineering and technology,  
 Manpower planning,  
 Organisation and overhead costs,  
 Environmental impact assessment.

**Financial Analysis:**

Basic elements of financial analysis,  
 Investment costs' schedules,  
 Cost of capital,  
 Operating costs' schedules,  
 Discounted cash-flow analysis,  
 Financial appraisal methods:  
     ratio analysis,  
     payback period,  
     net present value,  
     IRR, MIRR, IRRE,  
     risk, break-even, sensitivity analysis,  
     financial engineering; leverage effect,  
 Review of financial analysis.

**Economic Analysis:**

National development objectives,  
 Industrial policies and strategies,  
 Principles and methods of social and economic appraisal.

Measures of direct and indirect benefits and costs,  
 Rules of eliminating price distortions,  
 Introduction to shadow prices,  
 Procedures for shadow price determination,  
 Additional objectives,  
 Risk and uncertainty in project appraisal.

#### COMFAR III Expert:

Graphical User Interface,  
 Menu bar: Data entry - introduction,  
 Data entry - detailed procedures,  
 Selection of results, Calculation module,  
 Show Results module, overview and discussion of results,  
 Cashflow for financial planning,  
 Project's financial structure,  
 Data inputs cont'd: sources of finance, profit distribution, taxes, allowances,  
 Financial analysis:  
   schedules:  
     Discounted cashflow,  
     Income Statement,  
     Balance Sheet,  
   measures of project's viability:  
     NPV, short NPV,  
     IRR, MIRR, IRRE, return on joint venture capital,  
     payback period,  
     financial ratios,  
   analysis of the alternative financing structures - financial engineering and  
   leverage analysis,  
 Menu bar: Graphics - break-even analysis,  
 Menu bar: Graphics - parametric analysis,  
 Menu bar: Sensitivity - discussion of sensitivity analysis,  
 Special features: J-V projects, cost allocation, cost escalation and inflation.

Module: Economic Analysis - value added approach:  
 Assign Economic Analysis feature,  
 Application of Paste and Split features,  
 Valuation principles,  
 Shadow pricing,  
 Indirect taxes,  
 Imported content of local cost items,  
 Value added content of local investment cost items,  
 Import substitution, Indirect effects,  
 Discussion of schedules: value added analysis, net foreign exchange effect.

Demonstrations of COMFAR III Mini Expert and PRPOSPIN III were also held by the Consultant for the interested group of the participants.

### **II.3. Training.**

#### **II.3.1. Methods.**

Within the limits of the time available training has been organised in accordance with the programme. Throughout the Seminar four basic teaching methods have been applied, i.e.: lectures/demonstrations, discussions, case studies and exercises. In line with the practical orientation of the Seminar, the main emphasis was put on the active participation of each trainee through extensive use of hands-on exercises and case studies under the guidance of the Instructors.

Before any practical operations were undertaken by the participants each operation/procedure was explained by the Instructors. This was reinforced by the individual assistance of the Instructors in the course of solving the case studies, since the major objective was to give the participants as much exposure to the practical problems' solving as possible.

### **II.3.2. Instructors.**

Three UNIDO Instructors contributed to the substantive content of the Seminar:

J. Lukasik (13-31 January) - Introduction, Market, Financial and Economic Analysis, COMFAR,  
 M.N. da Silva (20-22 January) - Technical Analysis,  
 J. Moongananiyil (27-31 January) - COMFAR.

### **II.3.3. Materials.**

Participants received copies of the following training materials:

- Manual for the Preparation of Industrial Feasibility Studies, UNIDO E.91.III.E.18,
- Guide to Practical Project Appraisal; Social Benefit-Cost Analysis in Developing Countries, UNIDO E.78.II.B.3.
- Manual for Evaluation of Industrial Projects, UNIDO/IDCAS E.80.II.B.2.
- COMFAR III Expert Reference Manual,
- COMFAR III Expert Tutorial Manual,
- COMFAR III Expert Technical Manual.
- Handouts covering:
  - Project Development Cycle,
  - Market Analysis and Appraisal,
  - Technical Analysis,
  - Financial Analysis and Appraisal,
  - Economic Cost-Benefit Analysis and Appraisal.
- HP 10B Business calculators.

Selected copies of the handouts used by the Instructors were also distributed in the course of the presentations.

### **II.3.4. Case Studies.**

In order to illustrate the theories and concepts presented in the course of the first week "Patitaland" market case study was used by the Instructor. Participants developed market research brief and identified and analysed primary and secondary data requirements. Due to the restrictive time-frame of the first week no further exercises based on this case could be completed.

.For the purpose of familiarising the participants with the software the following approach was assumed in the course of this Seminar. The "guided tour" demonstration of the software structure was initially performed by the Instructor, while the participants - organised in seven teams - followed every step of the process. This initiation procedure included small exercises, during which the participants had the opportunity to familiarise themselves with the basic principles of the COMFAR III operation.

At the next phase the participants solved the Tutorial Manual "Tomato Canning" case study in three stages i.e.: cost data inputs, financial data entry and dividends' distribution plan. Every stage was followed by the comparison of results, discussion and the summary conclusions performed by the

Instructors, which included the discussion of the typical errors made by the participants. Final version calculation of results was followed by the analysis of the schedules and the viability criteria.

In order to reinforce the understanding of the intricacies of data entry procedures and to stimulate the attainment of certain level of independent work participants were exposed to the “Elektron” and “Krylandia Spare Parts’ Manufacturing Workshop” case studies. The advantages of these case studies comprised:

less structured form, thus making the case closer to the opportunity studies prepared in the developing countries and requiring more effort and initiative from participants in organising and structuring respective data inputs,

"open-ended" project financing, which in consequence demanded that participants develop and optimise the financing plan for the project.

Graphics and Sensitivity modules as well as Inflation option of COMFAR were discussed in detail based on the above case studies.

The next case used extensively in the course of the Workshop , i.e.: “Growmania Garments Ltd.” from the COMFAR III Expert Tutorial Manual, was used for the purpose of consolidating the participants’ newly acquired skills as well as for introduction of such features as joint-venture project, cost allocation and economic analysis. The participants completed the value added analysis and, under the guidance of Instructors, reviewed and analysed the results thus completing the appraisal process of this project.

A brief demonstration of the cost-benefit analysis together with the overview and interpretation of results was also performed by the Instructors based on the “Sahara Textile Mills” COMFAR III Tutorial Manual, however, due to the time constraint - the reasons of which are explained in II.2. - only the salient features of the relevant case study could be performed by the participants.

A "wrapping-up" summary session was made by the Instructors after each case study in order to point-out typical errors and highlight the most important new elements learned by the participants.

## **II.6. Participants.**

The total of 23 participants attended the Seminar’s activities. Complete list of participants is appended as Annex II. The breakdown by their respective institutions is presented below:

Department of Economic Development and Foreign Aid Co-ordination, Council of Ministers	-14
Ministry of Construction	-2
Albanian Electricity Corporation	-2
Mining & Processing Technology Institute	-4
German Technical Assistance Project (SME Promotion)	-1

The participants, most of whom had already previous exposure to COMFAR III Expert, have in general shown high interest in the presented content of the Seminar, good background and high level of involvement.

### **III. CONCLUSIONS, RECOMMENDATIONS.**

The following observations have been made throughout the course of the Seminar as well as in the course of individual talks held by the Instructor on many formal and informal occasions, which may be treated as the conclusions and recommendations for follow-up activities related to this project.

**III.1.** The organisational aspects of the Workshops were very good as was pointed out by the number of participants.

**III.2.** Considering the fact that participants had to attend to their respective everyday office duties, the effective time allocated to the Seminar activities was too short.

**III.3.** Every effort should be made to release participants from their office duties for the duration of the seminar in the future training activities of the similar character.

**III.4.** Newly acquired skills must be put to constant use in order to be perfected and not to fade out. The target group of participants, in order to become proficient in methods and techniques of appraisal of investment projects, requires ample opportunities to practice applications of the software in their professional capacities. The acquired skills are more of a technical nature and the analytical skills of the target group remain still to be developed.

**III.5.** Since the majority of the participants were from the Government Agencies their first priority was - understandably - to concentrate on public sector projects, specifically infrastructural, and the practical aspects of the economic analysis and appraisal of investment projects.

**III.6.** It was revealed both during conversations with the trainees and during the visit to Albanian Centre for Foreign Investment Promotion that in Albania skills are scarce and rather of low standard in the general area of investment project preparation and appraisal, especially with regard to private sector SME. The investment promotion activities are concentrated on the macro level, with direct operational procedures of identifying specific investment opportunities, developing the opportunity studies and promoting them amongst the potential local and foreign investors - definitely underdeveloped.

**III.7.** In view of III.6. it is suggested that UNIDO, basing on the Organization's vast expertise in the field of private sector investment promotion, forwards the proposal aiming at the institutional build-up and skills development in the area of investment opportunities' identification, preparation, appraisal and promotion. Such proposal, addressed to the Government of Albania, UNDP and PHARE should complement the on-going UNDP project as well as the PHARE institution building project assumed to begin in 1998.

More detailed proposal of the follow-up activities targeted towards capabilities' build-up has been appended as Annex III.



## **ANNEX I**

**Training Seminar on Investment Project Preparation, Appraisal and the Applications of COMFAR  
Tirana 13 - 31 January 1997**

Week 1

2 January 1997

	Monday	Tuesday	Wednesday	Thursday	Friday
Session 1	Introduction to the programme (Course objectives and outline) Importance of investment appraisal	Why do investment projects fail ?  Introduction to Market Analysis	Market forecasting : quantitative techniques and the limitations in their applications.	Production capacity, marketing programme and sales estimates	Introduction to financial analysis. Time value of money. Compounding/discounting
Session 2	Understanding goals of partners involved in investment Characteristics of Public Investment Projects	Basic market mechanisms - Demand and Supply  Price determined by market	Determination of production capacity and production programme based on market size	Specific aspects of export market analysis.	Project cost estimates - initial fixed investment - pre-production - working capital
Session 3	National/sectoral programming objectives and process	Market Research -Data requirements  Sources of information	Product pricing. Marketing strategy, market segmentation, price quality relationships;	Specific aspects of export market analysis. (case study)	Financial statements : - Cash flow table -Income Statement - Balance sheet
Session 4	Project development cycle Identification of Investment Opportunities - Concept & methodology	Income and Price elasticities	Qualitative market analysis. Market creation (discussion of concrete cases)	Assessment of promoter/project sponsor's capabilities (managerial and organizational appraisal)	Sources of finance Cost of finance Debt repayment

Week 2

	Monday	Tuesday	Wednesday	Thursday	Friday
Session 1	Overview of technical appraisal of investment projects	Location and site selection	Risk and uncertainty - Sensitivity analysis - Probability analysis	Calculation of the economic IRR and interpretation of the results	Introduction to COMFAR III
Session 2	Choice of technology Cost of technology	Environmental impact assessment. Screening of environmental impacts Identification of receptors of impacts	Introduction to economic cost benefit analysis	- Indirect Effects - Foreign Exchange effects - Employment Effects	COMFAR III Basic operation and hardware configuration -communication with the system
Session 3	Production cost Fixed/variable Direct/indirect	Financial Appraisal : Dynamic methods: Internal Rate of Return. Net Present Value	Use of shadow prices as opposed to market prices - applications and limitations	Value added in economic analysis of projects	COMFAR III Data structure, input and result browsers
Session 4	Financial Appraisal : Simple methods: rate of return (on investment, on equity), pay back period	Break-even analysis	Estimation of shadow prices - exchange rate - wage rate	Approval, monitoring and evaluation of the public sector projects and programs	Discussion of the topics of the week.

Week 3

	Monday	Tuesday	Wednesday	Thursday	Friday
Session 1	Graphical User Interface Menus/Items	Calculation rules and calculation of the results of the "Tomato case"	Case Application (contd.) - Review of results	Local Case study (Review of results)	Growmania Case: Economic data input (contd.)
Session 2	Data Structure/ Financial Data Input	Selection/ Review of results	Local Case study (Data input)	Special features of COMFAR	Growmania Case (contd.)
Session 3	Introduction to a case study (Tomato case).  Financial Data Input	Financial schedules/graphs	Local Case study (Data input)	Growmania Case: Introducing special features	Review of results - Growmania Case Study
Session 4	Financial Data Input- Tomato case study	Case Application (Electron Ltd.)	Local Case study (Data input)	Growmania Case: Economic data input	Review of results - Growmania Case Study

## **ANNEX II**

List of the participants in the Training Seminar on Investment Project Preparation,  
Appraisal and Application of COMFAR III (13-31 January 1997, Tirana)

No.	Name	Institution	Profession	Position
1.	Edmond Leka	DEDAC	engineer	Director of DEDAC
2.	Arben Cico	DEDAC	economist	Head of Investment Unit
3.	Shqipe Rrumbullaku	DEDAC	economist	Specialist in Incest. Unit
4.	Cajup Haxhirexha	DEDAC	economist	Specialist in Invest. Unit
5.	Mirela Menko	DEDAC	economist	Specialis in Invest. Unit
6.	Illir Azizi	DEDAC	informatician	Head of Information Unit
7.	Vasillaq Leno	DEDAC	engineer	Head of PMU (PHARE)
8.	Enkelejda Asllani	DEDAC	engineer	Specialis in PMU (PHARE)
9.	Julia Cela (Delvina)	DEDAC	economist	Specialis in Foreign Aid Coord. Unit
10.	Gjergj Dodbiba	ITNPM	engineer	Head of Information Department
11.	Arben Gazheli	ITNPM	engineer	Head of Newrable Energy
12.	Bledar Cocoli	ITNPM	engineer	Specialist of Information Department
13.	Fahri Maho	Ministry of Construction	engineer	Specialist Information Department
14.	Lorena Kostallari	DEDAC	economist	Specialist in Investment Unit
15.	Arian Turhani	DEDAC	economist	Specialist in Foreign Aid Coord. Unit
16.	Astrit Sulstarova	DEDAC	mathematician	Specialist in Foreign Aid Coord. Unit
17.	Kamelia Daja	DEDAC	economist	Specialist in Foreign Aid Coord. Unit
18.	Martin Toto	KESH	engineer	Director of Investment Department
19.	Merita Shehu	GTZ	economist	Specialist
20.	Diana Leka	DEDAC	economist	Specialist in Foreign Aid Coord. Unit
21.	Elvana Ranxhi	ITNPM	economist	Specialist Economic Department
22.	Dhurata Drasa	KESH	economist	Specialist
23.	Edmond Alite	Ministry of Construction	economist	Head of Coord. Department

P.s. DEDAC Department of Economic Development and Foreign Aid Coordination  
ITNPM Mining & Processing Technology Institute  
KESH Albanian Electricity Corporation  
GTZ German Technical Assistance Project (SME Promotion)

## **ANNEX III**