



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

20148

Distr.
LIMITED

IPCT.179(SPEC.)
2 April 1993

ORIGINAL: ENGLISH

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Regional Preparatory Meeting
for the First Consultation
on the Construction Industry*

13p.

Damascus, Syrian Arab Republic
10-11 February 1993

REPORT**

* Organized by UNIDO in cooperation with the Arab Union for Cement and Building Materials (AUCBM).

** This document has not been edited.

V.93-83734

February

CONTENTS

	<u>Paragraphs</u>	<u>Page</u>
INTRODUCTION	1 - 4	3
- Objectives of the Meeting	5	3
- Documentation	6	3
I. AGREED CONCLUSIONS AND RECOMMENDATIONS	7	4
II. ORGANIZATION OF THE MEETING	8 - 13	5
- Opening of the Meeting	8 - 11	5
- Election of officers	12	6
- Adoption of the agenda	13	6
III. SUMMARY OF DISCUSSIONS	14-22	7
Annexes		
I. List of participants		9
II. List of documents		13

INTRODUCTION

1. At its sixth session (28 May - 1 June 1990) the UNIDO Industrial Development Board approved the Director-General's proposal of Consultations Programme for the biennium 1992-1993. The programme includes the First Consultation on the Construction Industry.¹
2. The System of Consultations of UNIDO is organizing the First Consultation on the Construction Industry in cooperation with the United Nations Centre for Human Settlement (UNCHS-Habitat) and the Tunisian Centre for Building Materials (CTMCCV). This Consultation will be hosted by the Tunisian Government in Tunis, Tunisia, from 3 to 7 May 1993.
3. In the process of preparation for the Consultation, UNIDO, in cooperation with the University of California, Berkeley, and the California Foundation on the Environment and the Economy (CFEE), organized the Global Preparatory Meeting in Berkeley, California, USA, from 1 to 3 December 1992. The Meeting was attended by 20 participants (including 3 lecturers) from 9 countries in Africa, Asia, Europe, Latin America and North America. Habitat also participated at the meeting.
4. A regional preparatory meeting was convened in Damascus, Syrian Arab Republic, from 10 to 11 February 1993 under the sponsorship of the Arab Union for Cement and Building Materials (AUCBM). The Meeting was attended by 53 participants including 12 from four countries in the region and one from a regional organization.

Objectives of the Meeting

5. The objective of the Meeting was mainly to brief the participants from the Arab region about the conclusions and recommendations reached by the meeting in Berkeley. Another key objective was to identify the relevant constraints in the process of development of the construction industry in the Arab region at national and regional levels. The Meeting focused mainly on the following areas:

- Main trends and impediments to the development of the building and construction industry;
- Energy conservation and related research;
- Financing and management of the construction industry;
- Potential for development and durability of the sector;
- Environmental problems associated with sustainable development of the construction sector.

Documentation

6. Annex II contains a list of documents distributed at the Meeting.

¹ GC.4/2, IDB.6 Dec. 5. (e)

I. AGREED CONCLUSIONS AND RECOMMENDATIONS

7. As a result of the various issues that emerged during the discussions the following conclusions and recommendations were adopted unanimously by the participants at the closing session on 11 February 1993:

(a) The representatives of the various Arab countries agreed on the main conclusions and recommendations reached at the Global Preparatory Meeting held in Berkeley in December 1992. Among these, the Meeting particularly drew attention to the following:

- (i) The slow progress in the modernization of the industry including technological upgrading;
- (ii) The lack of financial resources and capabilities for training and human resources development;
- (iii) The lack of awareness and clear supportive policies for sustainable development of the sector;
- (iv) Resource and demand management including aspects of energy and environmental considerations;
- (v) The key role to be played by specialized international agencies in encouraging dissemination of know-how, sharing of experience and regional cooperation among developing countries and between developing countries;

(b) Due to the geo-climatic conditions and national resource distribution as well as the level of development from one country to another, each country should prepare a country paper on the status of the construction industry in the Arab region, with emphasis on technical, administrative, managerial, policy and legislative aspects. UNIDO is requested to prepare the terms of reference to be circulated by AUCBM to the different countries. Based on the inputs from these papers, AUCBM will prepare a regional paper to be presented at the Consultation in Tunisia;

(c) There is a lack of integration in the activities between the building materials producers, professionals, i.e. engineers and architects, and contracting firms, in addition to Research and Development (R+D) and financial organizations in the region;

(d) At the national level in many countries of the region, production capacities exceed domestic demand for building materials. This situation calls for the development of a more balanced distribution and marketing strategy at the regional level;

(e) It is realized that the industry is poorly supported by national as well as regional standards and specifications. This situation hampers the harmonious development of the industry, transfer of technology, and quality improvement. For a planned development it is imperative that the industry establishes close operational linkages with institutions responsible for R+D, standardization, building codes and quality improvement;

(f) Poor awareness coupled with lack of adequate legal regulatory mechanisms in the construction industry inhibit proper concern for energy conservation, environmental preservation and innovative technology;

(g) Recycling of industrial and agricultural wastes, by-products and residues offer many possibilities for production of alternative materials and components which will enable the construction sector to shift from local exhaustive natural resources to renewable raw materials. National governments should encourage the utilization of recycled materials by providing adequate fiscal and non-fiscal incentives;

(h) The contracting process in most countries of the region is not well organized and has no proper legislative support. This leads to a large number of contracts being allocated to foreign companies. Partnership between domestic and foreign companies needs to be encouraged in order to facilitate smooth technology transfer and to upgrade local skills. Standard agreements should be formulated by the countries of the region and be compatible with the nature and magnitude of construction projects;

(i) In the region as a whole, maintenance practices are not considered as an integral part of the construction process. As a result, the life cycle cost analysis is not feasible. Cost analysis, estimating and contracting practices need to include maintenance; in projects involving transfer of technology maintenance aspects, including training of local counterparts, should be accorded particular attention;

(j) With the increasing population, as well as urbanization, and rising costs, shortage of housing in several countries of the region is assuming significant dimension. Sharing of experience with countries who have been successful in meeting the housing demand should be encouraged within the region;

(k) To conclude, the Arab region is well placed to encourage regional cooperation in developing and strengthening the construction industry, thereby encouraging competition among the professionals at national and regional levels. Therefore, there is a great potential for cooperation in the areas of production, marketing, consultancy and management.

II. ORGANIZATION OF THE MEETING

Opening of the Meeting

8. The Director of the Area Programmes Division welcomed the participants on behalf of the Acting Director-General of UNIDO. He extended his appreciation to both the Minister of Industry and the Minister of Environment for the importance given to this event. He also thanked AUCBM for the successful organizational arrangements for the Meeting. He noted the increasing interest of many developing countries in the construction industry and the need to improve national capabilities in order to create a more competitive sector.

9. The President of the Building Federation of Tunisia noted the major role the construction industry is playing in responding to the housing demand and the significant contribution of that industry in the national economy. Close

cooperation between all the countries in the region is needed in order to strengthen the sector and widen the benefits for all.

10. The President of the Syrian Engineering Association in his remarks recognized the major importance of the sector and the role played by the Association in the promotional and development efforts for the industry. The Secretary-General of AUCBM reiterated that international and regional organizations should give priority to building materials and construction industries in the region.

11. In conclusion, the Minister for Industry of Syria mentioned the important role the construction industry as a whole was playing in the balanced development of the country. He also noted the significant contribution of the construction sector to the gross domestic product. The interdependence between the construction industry and that of agriculture in meeting the basic needs at national level were essential. In this endeavour both the public and the private sectors were cooperating in the efforts to increase productivity. Excessive energy consumption as well as environmental awareness were also mentioned in his address as major areas of concern in the development of the industry.

Election of officers

12. The following officers were elected:

- | | |
|----------------|--|
| Chairman: | Ghassan Tayyara (Syrian Arab Republic)
President of the Order of the Syrian Engineers |
| Vice-Chairman: | Ahmad Al-Hamo (Syrian Arab Republic)
General Manager
Cement Organization of Syria |
| Rapporteur: | Faisal T. Suyagh (Jordan)
Head, Building Materials Division
Royal Scientific Society
Building Research Center |

Adoption of the agenda

13. The following agenda was adopted:

(i) Introductory remarks by:

- The Director of Area Programmes Division, UNIDO;
- The President of the National Building Federation of Tunisia;
- The President of the Syrian Association of Engineers;
- The Secretary-General of AUCBM;
- The Minister for Industry.

(ii) Election of the Chairman and officers.

(iii) General presentation of the System of Consultations.

(iv) Presentation of social housing policy in Tunisia.

(v) Presentation of the main conclusions and recommendations of the Global Preparatory Meeting followed by discussion and exchange of views by participants on:

- Major constraints in the development of the construction industry in the Arab region;
- Financing and management constraints;
- Energy conservation and related research in the industry;
- Environmental issues in the construction industry;

Presentation on the status of the building materials and construction industries in Syria followed by discussion on:

- Potential for regional cooperation.

III. SUMMARY OF DISCUSSIONS

The following major areas of concern emerged from the discussion:

14. Cement had become a major input to the construction industry since the early 1970s. In some countries it was a vital sector of the national economy; local production in some cases exceeded national consumption capacity. Nevertheless, as noted by a participant, the region was heavily dependent on imports of other basic materials. For instance, there was lack of plate-glass manufacturers; in addition, wood for construction was rare. There was a great need for a database system that was essential for planning and forecasting demand at regional level with the view to providing a more balanced distribution in the region.

15. The problem of quality was pointed out by many participants. In the construction industry quality was often questioned. Adherence to codes and standards should be subject to proper control and reinforced if quality performance were to be achieved. Research and development, particularly in countries where local materials and techniques were utilized, should be encouraged. The lack of dialogue at operational level between consultants, contractors and R+D was a major cause of inadequate compliance with quality standards. One delegate noted that in his country discussions on quality were frequently held between all the interested parties involved in the case of newly executed works; soil conditions as well as performance of the enterprises were discussed. He particularly stressed that quality control was not limited to laboratory tests. Poor workmanship and/or inappropriate technology might also be part of the problem.

16. Engineering consultancy services in the construction sector were well developed in the region. Professional associations were occupying an important position in the development efforts at the national level. However, consultancy services including design had a limited field of operations. Foreign expertise was needed particularly for heavy civil engineering works. In most cases, local firms were not in a favourable position to enter into joint contracting or to operate on an equal footing with their foreign partners. Efforts were needed to reinforce mastering of expertise and build-up of competitive partnership capabilities.

17. The meeting also noted that contracting capabilities were to be given proper consideration in the development process of the construction industry. Three areas of major constraints were mentioned, namely: managerial, administrative and technical. Delayed completion of construction works, among other problems, was, in most cases, increasing costs and causing losses to

contractor and client alike. Responsible management of complex construction operations including the management of financial resources were major elements for a satisfactory implementation process. The upgrading of managerial capabilities in the field of contracting was also to be addressed with the view to reinforce the competitiveness of the sector and create better partnership opportunities.

18. Lack of financing was expressed by many participants as a major constraint in many countries in the region. Shortages of capital hampered production of materials for the construction industry, limited research and development as well as the acquisition of materials and equipment in addition to technology. Lack of financing also inhibited expansion of enterprises and modernization. Considering that the construction industry in general was a risky undertaking, access to financing or credit institutions was limited; large enterprises were more likely to obtain credit facilities than smaller firms.

19. It was noted that maintenance was a marginal activity in the construction sector and as such was not an integral part of the cost analysis of projects. It was also noted that, in most cases, with regard to transfer of technology packages no particular provision was made for maintenance and training. The need for training of cadre was also necessary.

20. The lack of institutional support and promotion mechanisms relating to building materials and industries was felt in many countries in the region. Existing R+D institutions, professional centres and associations of i.e. engineers, architects, contractors as well as financing or banking institutions, did not interact on a regional scale. Interaction and linkages between those organisms were essential for a common approach in the promotional efforts. A participant mentioned that in the specific context of promotion of construction of social housing programmes in his country, close cooperation was encouraged through appropriate government policy and institutional mechanisms. Furthermore, he added, interaction between the public and the private sector was essential including the participation of appropriate financial institutions.

21. The production of building materials for construction had its repercussion on the energy demand. A participant expressed the view that energy conservation should also be taken into account at the design stage of buildings. The orientation of a building was not to be neglected in the utilization of solar energy. Currently in the region there were no specific regulations relating to energy conservation. Research centres, he added, should address the problem. One participant noted that there was a great need to sensitize end-users and create proper awareness in energy conservation. Technological solutions are feasible including the use of appropriate insulating materials. There was, however, the need for a common policy approach considering the climatic and geographic similarities in most countries of the region. The same participant was of the opinion that regional cooperation was necessary in that matter.

22. Environmental issues related to the construction industry were raised. The depletion of natural non-renewable resources on the one hand, and pollution on the other hand, were major areas of concern in the region. However, as in the case of energy conservation, there was a lack of policy measures, control mechanisms and regulations, particularly in matters related to both construction and production of building materials.

Annex I

LIST OF PARTICIPANTS

Jordan

Mohd Ghazi Abu-Afifeh, Civil Engineer, Jordanian Engineers Association,
P.O. Box 835, Amman

Husam Ed-din M. Assaf, Technical Advisor, Zeyad Salah & Partners
Contracting Co., P.O. Box 7245 Amman

Mutaz Moh'd Qutob, Civil Engineer, Jordanian Engineers Association, P.O.
Box 835, Amman

Omar Zeyad Salah, Zeyad Salah & Partners Contracting Co., P.O. Box 7245,
Amman

Faisal T.Y. Suyagh, Head, Building Materials Division, Building Research
Centre (BRC), RSS, Arab Union for Cement and Building Materials (AUCBM),
P.O. Box 925819, Amman

Morocco

Abderrahim Acharhabi, Directeur de la Recherche, Laboratoire public
d'essais et d'études (L.P.E.E.), 25, rue D'Azilal, Casablanca

Larbi Chmali, Ingénieur d'Etat, Chef de Service de Normalisation et
réglementation, Direction des équipements publics, Ministère des travaux
publics, Hay Ennahda II, B.P. 5130, Rabat

Republic of Yemen

Mohamed Abdo Al-Hakim, General Director for Technical Affairs, Yemen
Corporation for Cement Industry and Marketing, Hadda Commercial, P.O.
Box 1920, Sana'a

Mohammad Ahmad Ali Thabet, General Director for Planning and Research,
Ministry of Industry, P.O. Box 1804, Sana'a

Syrian Arab Republic

Ismail Abo Hayleh, Ministry of Housing, Damascus

Maha Al-Alem, Engineer, General Organization for Cement, Mazzeh,
Damascus

Haithm Hosam Al Deen, Civil Engineer, Millihouse Co., Latakia Br. 202,
Damascus

Hassan Al Farhan, Engineer, Ministry of Housing and Utility, Damascus

Ahmad Al-Hamo, Engineer, General Manager of the Cement Organization of Syria, Damascus

Ahmad Suleiman Al-Hassan, Professor, Faculty of Civil Engineering, Damascus University, Damascus

Adnan Ibrahim Al Khatib, Minister-Counsellor for Construction and Building, Chairman of the National Committee of Syrian Contractors, Ministry of Construction and Building, P.O. Box 10953, Damascus

M. Bashar, Al-Nou Nou, Head of Observation, Group of Housing, Airport Project, General Housing Establishment, Mazzeh, Damascus

Ahmad Al-Rousan, Secretary-General, Arab Union for Cement and Building Materials (AUCBM), P.O. Box 9015, Damascus

Niman Askhita, Chief, Manufacturing Directorate, Construction Material Department, P.O. Box 3354, Millihouse Co., Damascus

Hossim Auad, Ministry of Housing, Damascus

Mohamed Faez Barshe, Engineer, Member of Professional Union of Builders, Damascus

Ebtissam Fmy Bshara, Engineer, Technical Department, General Organization for Cement and Building Materials, P.O. Box 5265, Damascus

Raja Dabbas, Manager of Planning, General Housing Establishment, Mazzeh, Damascus

Yassir El Saka, Head of Department, General Organization for Cement and Building Materials, P.O. Box 5265, Damascus

Mowaffak Felo, Head of Department, General Organization for Cement and Building Materials, P.O. Box 5265, Damascus

Hussein Hamid, Director of Technical Intermediates Institute, Ministry of Construction and Building, P.O. Box 70953, Damascus

Nadim Hamoud, Director, Roofing Tiles Factory, Millihouse Co., Homs, El Zahra, WIDAD Pharmach., Damascus

Maen Haj Ibrahim, Technical Director, General Establishment for Housing, Al Mezza, Damascus

Ziad Kalash, Assistant Technical Director, General Organization for Cement and Building Materials, P.O. Box 5265, Damascus

Nazir Karam, General Organization for Cement and Building Materials, P.O. Box 5265, Damascus

Mouafak Karboutly, General Organization for Cement and Building Materials, P.O. Box 5265, Damascus

Anwar Khdier, Engineer, Head, Construction Material Dep., Millihouse Co. Adra, Damascus

M. Omran Kodmani, Head Designer, Kassion Company, Damascus

Chafine Kossar, Ingénieur civil, Ministère de l'Habitat, Damascus

Afman Laban, Deputy Chief, Executive Department, General Establishment for Housing, Al Mezza, Damascus

Mohamed Lattouf, Professeur à l'Université de Damas, Faculté de génie civil, Damascus

Hamadeh Majed, Head of Department, General Organization for Chemical Industries, Jesr Al Abiad, Kurd Ali Street 50/4, Damascus

Huda Maleehi, Civil Engineer, Kassion Company, P.O. Box 10672, Damascus

Hani Nabulsi, General Organization for Cement and Building Materials, P.O. Box 5265, Damascus

Chawki Khattab Omar, Bureau privé (études et consultations dans le domaine de construction et génie sanitaire), 26, rue de Mdjedel, Damascus

Nezar Richi, Director of Planning, Prime Ministry, Supreme Council of General Construction Co., P.O. Box 6280, Damascus

Sameer Rishan, Consulting Engineer, General Housing Establishment, Mazzeh, Damascus

Taher Shakfeh, Project Manager, Ministry of Building and Construction, P.O. Box 10953, Damascus

Haitham Skaf, Chief, Construction Unit, General Company for Hydraulic Studies, Homs, P.O. Box 752, Damascus

Mohamad Ghassan Tayara, President, Order of Syrian Engineers, Zme Square, P.O. Box 2336, Damascus

Hana Tharkarly, Civil Engineer, Industrial Testing and Research Center, P.O. Box 845, Damascus

Kassem Kassem Yassein, Director, Centre of Building and Construction, Ministry of Building and Constructing, P.O. Box 10953, Damascus

Wahib Zeneldin, Associated Professor, Faculty of Civil Engineering, Damascus University, Order of Syrian Engineers, Damascus

Subhi Ziadi, Civil Engineer, Engineering Office, al Sawra Street, 2nd Floor, Darraya, Damascus

Tunisia

Laabidi Barhoumi, Président Directeur Général, Centre Technique des matériaux de construction de la céramique et du verre (CTMCCV), 5, rue Abouhassen Elgabsi, 1003 Tunis

Moncef Koçli, Secrétaire Général de la Fédération nationale du bâtiment (FNB), Tunisie promoteur immobilier, Essoukna, 103 Avenue de la Liberté, 1002 Tunis

Khaled ben M'Barek, Président, Fédération nationale du bâtiment (FNB), Union tunisienne de l'industrie de commerce et de l'artisanat (UTICA), 103 Avenue de la Liberté, Belvédère 1002, Tunis

Regional Organizations

Ali Dhaouadi, Secrétaire Général, L'Union Maghrébine des Matériaux de Construction, Zaouiat Dahmani, B.P. 862, Tripoli, Libyan Arab Jamahiriya

UNIDO Consultant

Mr. T.N. Gupta, Executive Director, Building Materials and Technology Promotion Council (BMTPC), Ministry of Urban Development, G-116 Nirman Bhawan, New Delhi, India

Annex II

LIST OF DOCUMENTS

- Report of Global Preparatory Meeting for the First Consultation on the Construction Industry (IPCT.176 (SPEC.))
- Structure and function of the construction industry with emphasis on the developing countries (ID/WG.528/1)
- Improving the performance of the construction industry: Issues and opportunities (ID/WG.528/2)
- La politique du logement social en Tunisie: 1956 - 1992 (ID/WG.528/3)