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ICS / UNIDO
International Centre for Science
and High Technology
mining

FORGEA INTERNATIONAL
Training and Cooperation
Centre in the field of Geo-
mining
and Environment.

Expert Group Meeting

**"Best Available Technologies for the Exploitation and Recycling of Inorganic Materials.
Management of Construction and Demolition Waste in Building Industry"
28 May – 1 June 2002, Iglesias (Italy)**

FINAL EXECUTION REPORT

the Forgea International executive director.

Cagliari, June 30th, 2002 / GC

Structure of the Report.

- I. Introduction and justification.
- II. Background.
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- 1) : Table of candidates, admitted and participants.
- 2) : List of lecturers.
- 3) : Final Programme.

I. Introduction and Justification

1. "Justification" lies on two conceptual and practical components, corresponding to different, complementary views:

i). firstly on the background, that is to say, the present state of the things and related problems as a legacy of the past, as it can be viewed with our eyes of today and faced with our today's resources;

ii). secondly on the objectives, whatever they can be, which means our eyes, energy and efforts turned to the future.

II. Background.

2. The strategic and cultural source of these Projects' typology has to be searched in increasing attention devoted by UN system to priorities dictated by the objective tensions between environment safeguard, imperative needs of economic development through its unavoidable industrial passages, research and implementation of technologies giving chances of waste recovering not only for environment safeguard and rehabilitation but for its re-use, through adequate treatment and change, as a basic component, with role of raw material, for new, different industrial processes.

3. The key-problem of "no-waste technologies" in the double framework of environment */parameters and of coherent productive processes has generated technical, organizational, socio-economic and normative dynamics in large extensions and number of industrialized countries, from Europe (Russia, Germany, Italy) to Japan to USA.

Very serious impacts of the question are more and more heaving over plenty of countries belonging to developing areas as well as to areas in hard socio-economic transition, because of negative convergence between unlimited exploitation of industrial and mining resources and lack of what could be called as "culture of the future" with its practical implications.

4. In fact, in such a general conceptual and general framework, the resource "New Materials" is taking increasing weight as a technique for the environment mastery.

In fact it brings inputs of strong differentiation into systems of relatively passive protection of things and people: that is to say, it brings methods to change environmental components into "New Materials" opening the way, on one hand to new industrial exploitations, on the other one to economic returns even in countries of recent industrialization.

One of the main areas and technologies of practical specializations is represented by building materials industry, namely focusing on construction and demolition waste management and exploitation.

III. Objectives.

5. Trying to shortly summarize, we would like to remind these basic objectives of EGM.

i). To convey and aggregate information on chances of industrial waste exploitation through innovative processes, with emphasis on building industry sector.

ii). To provide participants with advanced technological criteria and methods aimed to waste recover and exploit or to waste disposal.

iii). To build a system of relationship with those entities of their countries being relevant and operating in fields included by course contents.

IV. Organization.

Basic structures.

6. EGM was organized and led in Cagliari, Italy, by ICS / Unido in collaboration with the local Centre Forgea International as Execution Agency.

7. Forgea International, with office in Cagliari, Sardinia, Italy, is a training centre in the fields of Geo – Engineering, Technologies of Materials, Environment, to the intention of scientific and technical experts, management staff, researchers, from developing and emerging countries.

Its mission finds inspiration as well as working instruments:

- i). from a specializing approach, concerning originally the impact of geo-mining industries over environment;
- ii). from information and training resources made available in Sardinia by heritages coming from extraction industries which marked the isle history and are a true "case-study" rich in polyvalency and in exemplariness.

Preparation.

Project document, detailed programme and schedule: process lasting from end of February to the end of April.

8. ICS / UNIDO, and for ICS Prof. Meriani as a Scientific Coordinator, prepared originating scientific documents and designed progressively definite EGM programme.

All these elements have been forwarded to Forgea International for the needs connected with check, information diffusion, equipment, management of the administrative arrangements for teachers and participants.

Information diffusion: from April.

9. Information content and material.

- i). papers: the above mentioned working papers drafted by ICS/UNIDO as components of the process, beginning by the Project Document, based on "Aide-mémoire";
- ii). communication to Forgea network of institutions and counterparts in the EGM target – countries, reminding the general Forgea programme for 2002, sent to them on April 11th and including detailed mention and summary description, among others, of this ICS/Unido EGM scheduled for May – June 2002.

10. Action over information diffusion.

Diffusion was oriented toward agreed target – countries, namely: Countries belonging to the South and South – East of the Mediterranean basin.

Broadly speaking, ICS exploited that institutional and academic network which looks among its constant working references, being at the same teaching resource as well as field of candidates for in training events participation.

Forgea, besides receiving and filing ICS candidatures in order of an omni-including selection, exploited its own network, based in growing consolidated interaction with relevant countries: official and responsible relationship with Ministers, high Governmental Administrations, specializing Units in relevant fields, UNIDO territorial Units, Italian Embassies as a general systematic flow of information, Italian Consulates for visa procedures, addresses of individuals, i.e. former courses participants, at the title of working and professional friendship.

Candidatures, selection, visa procedures: from April 25th.

11. A total of **22 candidatures** were received by ICS and Forgea and registered by Forgea: 6 from Algeria, 7 from Egypt, 6 from Morocco, 3 from Turkey: belonging to Governmental Administrations, Companies of public and private economy, Universities, R&D Entities.

Selection was made jointly by ICS/Unido (Prof. Meriani) and Forgea International (Mr Corbani). **15** were admitted, but 3 of them met difficulties in visa process and 2 more of them renounced. EGM participants were therefore **10** :

Algeria : 1.
Egypt : 5.
Morocco : 2.
Turkey : 2.

ATTACHMENT 1. Synoptic table containing visualized process of candidatures and admissions, and therefore the names of candidates, of those who were admitted, of the actual participants. Through analysis of all individual application forms, table includes data being relevant for a general view of the group and for selective options.

V. EGM held.

Premises and services.

12. EGM was allowed to rely on buildings, structures and services of AUSI (AUSI – Associazione per l'Università del Sulcis – Iglesiente), that is to say:

- i). AUSI Building classrooms (Palazzo Bellavista) which were made available to the EGM for its total duration according to the needs of the scheduled activities.
- ii). AUSI restoration room and service for lunch.

General thematic contents.

Methodology and training formulas.

13. Selection and technical profile of materials.

Evaluation of evolution's cycle of materials: theory and practice.

Basic concepts about management and exploitation of construction and demolition waste: objectives, potential and limits, economical aspects.

Handling and management of construction and demolition waste in Sardinia region: state of the art, environmental and economical aspects, case histories.

Asbestos immobilization, recovery and exploitation problems and perspectives.

Deconstruction waste recycling, case – studies from Italy, Spain, Europe in general.

14. Teaching formulas developed such above themes through :

- i). classroom lectures over main relevant theories and methods;
- ii). development of cases studies and histories usually targeted on represented countries
- iii). experiences and events of represented countries and their participants;
- iv). field visits to industrial complexes according to their relevance for the topics discussed by classes.

Opening.

15. EGM was open on the morning of Tuesday, May 28th.

* Professor Sergio MERIANI, from the Management Staff of ICS/Unido, EGM Scientific Coordinator, provided participants with an introductory description of the programme (content and general timing).

* Mr Gianmario CORBANI, Forgea Coordinator, designed the working framework and availabilities of the organization during EGM week.

Each of EGM participants introduced himself, through adequate presentation of his professional and managerial identity as well as of his interest's liaison to this event and of hypotheses of contribution.

Programmes.

Classes . Field - visits . Case - histories . Discussions and round tables.

16. Four working typologies marked the rhythm this of the workshop running:

- i). room lectures,
- ii). technical field visits,
- iii). case-histories usually introduced by participants (sometimes keeping double role) assisted by teachers and experts,
- iv). discussions and round tables opening large fields for exchange and synergies of concepts, data and experiences.

11. Here below the actual grid of the EGM's daily programme.

Daily Programme.

Tuesday 28th		
<i>morning.</i>		
09,00 – 10,30	a). Registration. b). Opening by local Authorities, ICS and Forgea International.	- Mr.G. Corbani, <i>on behalf of Iglesias Major and personally as Forgea Director</i> - Prof. S. Meriani, <i>as ICS Management Representative and EGM Scientific Coordinator</i>
10,30 – 11,00	coffee break	
11,00 – 12,30	c). Presentation: of Participants of ICS history and programmes of Forgea history and programmes	<i>by Participants;</i> <i>by Professor S. Meriani,</i> <i>ICS/Unido Coordinator;</i> <i>by Mr. Corbani, Director.</i>
12,30 – 14,30	lunch	
<i>afternoon.</i>		
14,30 – 16,00	"Materials Cycle Management of Building Yards" I. "An introductive overview on management and exploitation of construction and demolition waste".	<i>by Eng. Giorgio Bressi, Italy,</i> <i>Technical Director of ANPAR –</i> <i>National Association of</i> <i>Enterprises working in the field</i> <i>of Recycled Aggregates.</i>
16,00 – 16,30	coffee break	
16,30 – 18,00	II. "Management of building yard. Technological aspects".	<i>by Eng. Giorgio Bressi</i>

Wednesday 29th		
<i>morning.</i>		
09,00 – 10,30	I. "The construction and demolition waste stream. Problems to the environment when generating waste".	<i>by Eng. Harro Draheim,</i> <i>Spanish C&D waste Recycling</i> <i>Ind. Assoc.(GERD),</i> <i>International Expert in</i> <i>treatment of demolition waste,</i> <i>member of the TG3 Working</i> <i>Group of the EU for sustainable</i> <i>construction.</i>
10,30 – 11,00	coffee break	
11,00 – 12,30	II. "Handling and management of C&D waste, experiences obtained in autonomous Community Catalunya in Spain".	<i>by Eng. Harro Draheim</i>
12,30 – 14,30	lunch	

<i>afternoon.</i>		
14,30 – 16,00	I. "Quality, assessment and assurance: qualified management, role of the client, role of the demolition industry. Quality, assessment and assurance: recycling, product quality assurance; technological levels of recycling; aggregates as products".	<i>by Eng. Harro Draheim</i>
16,00 – 16,30	coffee break	
16,30 – 18,00	II. "Demolition industry. Needed policies". Building some case-studies with participants.	<i>by Eng. Harro Draheim</i>

Thursday 30th		
<i>morning</i>		
09,00 – 10,30	I. Asbestos. Problems of inertisation.	<i>Prof. Guido Ennas, Italy, University of Cagliari, Department of Chemical Sciences.</i>
10,30 – 11,00	coffee break	
11,00 – 12,30	II. Recovering and recycling of inert stony materials from demolition.	<i>Prof. Marco Surracco, Italy, University of Cagliari, Department of Engineering and Environmental Technology</i>
12,30 – 14,30	lunch	
<i>afternoon.</i>		
14,30 – 16,00	I. Processes of low environmental impact for the treatment of minerals.	<i>Prof. Paolo Bevilacqua / Associated Professor in Raw Materials Engineering // University of Trieste.</i>
16,00 – 16,30	coffee break	
16,30 – 18,00	II. Processes of low environmental impact for the treatment of minerals.	<i>Prof. Paolo Bevilacqua</i>

Friday 31st		
<i>morning</i>		
09,00 – 10,30	I. Recycling industry in Europe.	<i>Prof. Mario Pelino, Italy, Full Professor of Science of Materials, University of l'Aquila.</i>
10,30 – 11,00	coffee break	
11,00 – 12,30	II. Impediments and perspectives. New technologies for recycling applied to different waste streams.	<i>Prof. Mario Pelino</i>
12,30 – 14,30	lunch	

<i>afternoon.</i>		
14,30 – 16,00	I. Inertisation of hazardous waste in cement and glass matrices.	<i>Prof. Mario Pelino</i>
16,00 – 16,30	coffee break	
16,30 – 18,00	II. Case – studies.	<i>Prof. Mario Pelino</i>

Saturday, June 1st		
<i>morning</i>		
09,30 – 12,30	Discussion, Follow-Up and Recommendations.	

The time of each class unit was in principle of 90 minutes, with practical chances of extension as far it is requested by the dynamics of the lectures and by interactions with participants. Visits time was organized according the different situations. Time for case-histories, round tables, etc., was in principle the equivalent of two class units.

VI. Participants.

12. Without prejudicing of individual relationship and performance, EGM was able to rely on a clear and positive group response, in terms of:

- focused attention, perception and acquisition of the teaching message,
- active reaction in search and development of linkage between, on one hand, EGM contents and dynamics and, on the other hand, context of originating countries as well as personal history of the individuals,
- and finally collaborative behaviour on the various aspects of the EGM running.

VII. Lecturers .

13. The teaching system relied on following resources.

A team of teachers, from Italy and Europe Universities, characterized by strong specialization and experience of management in relevant sectors.

Teaching resources from Universities of Sardinia, in particular of Cagliari.

Expertises available on the field in programmed technical visits.

ATTACHMENT 2. includes name and qualifications of all collaborators as teaching staff in this EGM.

VIII. Achievements .

14. Two orders and two meanings of achievements.

15. The first and main expression of the EGM achievements lies on those offering, forwarding and acquisitions of new and advanced knowledge which are at the heart of the event and represent its *raison d'être*.

In fact the concept "achievements" evokes the package of knowledge, in science, technology and experience, which the training and exchange action has "committed" to participants to be exploited by them in their own country and inside their specific context.

It practically allows to formulate a judgement of actual and effective implementation of this knowledge dynamics which has been managed by this EGM.

The actual profile of the achievements is visible inside the framework of programme contents, teaching – learning action, cases discussions, visits.

We therefore refer to the whole system of scientific and technological contents' management as it results from number of relevant parts of this Report, in order to say that, what we had programmed, we did.

16. Second order of achievements can be seen in the increasing adhesion to the scientific and technological contents and consequent suggestions and directives which generate this important training line of Material Sciences and Technologies in their chances of application on the field.

The number of EGM participants was rather limited by renounces and by consular procedures connected, in three cases, with some internal misunderstanding between Governmental Departments.

Anyway participants, besides being personally interested in *this* subject even before taking part in EGM through contacts having been intensively held in the two senses during the information diffusion, enjoy of right qualification and in many cases of high and very high institutional level.

Moreover, we know through insistent keeping in touch that behind participants there are attention and interest of the contexts which introduced and encouraged their participation, we mean given well – known Ministries, enterprises Associations, Agencies, etc.: ways of possible interaction even behind pure training.

IX. Recommendations.

17. Final recommendations resume the main lines of the EGM scientific and technological input and try to give effective and actual issues, transforming them into analytic and operational instructions and action lines.

18. First of all, instructions on how to operate, and how to organize operations, at the technical level on the field of building materials wastes: priorities to prevention, then to disposal, then to the processes of re-use.

19. Secondly, to work for systems of rules transforming right processes in legal and/or administrative obligations.

20. Thirdly, to create due connections between such a dynamics and problem and the countries policies at industrial and at socio – economic level.

21. These recommendations, as far as they are seriously assumed, acquire the aspect of a deontological mandate.

X. Follow-up.

22. Three lines and times of follow – up.

23. Immediate follow – up, through a large forwarding of documentation: papers which have accompanied the lectures running, then the proceedings as soon as they are made ready.

24. Second phase follow – up, intention of organizing inter – countries meetings with advisory support of ICS / UNIDO.

25. A third phase could involve a project of technical and entrepreneurial nature, like technical structures in order to treat and better manage matter being relevant according EGM subject and ICS/UNIDO Area of New Materials.

26. We would like to remind the permanent question of the training investments control, which leads once more to the objectives' formulation.

In fact, number 5 of this Report drafts in short a set of objectives for this EGM.

But going just deeper and farer, as a strategic directive and parameter of successive evaluations, we should keep in mind and study actual ways of (even gradual) more orders or groups of objectives.

27. The first of them deals directly with training in the participants' group: to improve their own scientific and technological knowledge so to enable them in better managing industrial processes and environmental phenomenology.

28. The second one deals rather with relationship and expected interactions between:

- * the training enjoyed by participants;
- * the institutions organizing and leading the course;

* significant points, institutions, organizations, enterprises, operating in the involved countries belonging to Mediterranean basin in the fields treated by the course.

29. A third model of objective should be a reasonable design of those **changes** which should be the final result of the training, viewed as a single or as more training events, leading to training system "searching" bridges towards non – training systems (institutions, administrations, enterprises, etc.) to get a complementary role for their own activities.

Change as development of participants' effectiveness and roles, change as positive evolution of their problem – solving, everything to be checked in their own actual context.

30. Such a concept of objective opens over two working lines:

- a follow-up for training continuities;
- a system of indicators and its running and management, as far as it should say something about returns from training investments.

XI. Conclusions.

31. We wish this EGM collaboration, contractual obligations included, between ICS/UNIDO and Forgea International as execution agency and local organizer, has encouraged and created fruitful synergies, each of them using its own working instruments and context.

Effectiveness perception and evaluation belong to records and due analyses, a field where we thrust in, and give the floor to:

- information, descriptions and evaluations managed by the Scientific Coordinator Professor S. Meriani through his reporting;
- gathering of participants views: questionnaires and relevant elaborations.

XII. Acknowledgments.

32. Our warmest acknowledgements are addressed:

to the ICS/ UNIDO framework's actions and attitudes, having open the way to generous synergies.

to the Participants, for their active and strongly motivating attention as well as for their qualified contribution in teaching programmed passages;

to the Speakers and Assistants group organized and directed by the Scientific Co-ordinator;

to AUSI – Associazione per l'Università del Sulcis – Iglesiente, namely to its Chairman Prof. Ilio Salvadori, for friendly attitude and availability in supporting services;

to the governmental, institutional and academic Structures and Officials of the countries that gave strong effective support to the organization of information, invitation and evaluation of candidatures for EGM, as well as to the Italian Diplomatic and Consular Representatives and to UNIDO territorial Units.

Gianmario Corbani

ICS/UNIDO - FORGEA INTERNATIONAL

Cagliari, 28th May 2002/GC/tm

Training Course on: " BEST AVAILABLE TECHNOLOGIES FOR THE EXPLOITATION AND RECYCLING OF INORGANIC MATERIALS. MANAGEMENT OF CONSTRUCTION AND DEMOLITION WASTE IN BUILDING INDUSTRY."

Cagliari / Iglesias, 28th May - 1st June, 2002

LIST OF CANDIDATES, ADMITTED, PARTICIPANTS: BY COUNTRY AND IN ALPHABETIC ORDER

Ca ndi dat es	Part Ad mit ted	Part icip ant s	Country	Name	Sex/ age	Address	Formal education	Langua ges	Working experience and present job	Publications	Institution
1	1		ALGERIA	Hamid BEDJAOUI (Renounced)	M/ 37	35, Rue Cherif Chalabi n° 7 09000 Blida E-mail: hbedjaoui@caramail.com	Politechnical National School: degree in Mining Engineering	Eng. 3 French Arab.	Junior Director of Construction of Deposit and Mining Security. Chief of Service Mining and Technical Controls.		Ministry of Energy and Mines - Algiers
2			ALGERIA	Mustapha BENDOUMA		Fax: 00 213 21670337 Fax: 00 213 21677105					Ministry of Energy and Mines - Algiers
3			ALGERIA	Smail EL DJOUZI	M/36	Cite Badjarah B7-26 App n° 10 15211 Algiers	USTHB Algiers: degree in Economic Geology	Eng. 3 French Arab	Engineer at the Ministry of Energy and Mines (Follow up and Control of Mining Activities)		Ministry of Energy and Mines - Algiers

Ca ndi dat es	Ad mit ted	Part icip ants	Country	Name	Sex/ age	Address	Formal education	Langu ges	Working experience and present job	Publications	Institution
4	2		ALGERIA	Mohammed GUERFI (Renounced)	M/44	25, Street Si Nordine 42145 Damous Tel: 00 213 21525236 Fax: 00 213 21521748	ENSG Univ., France: Magister in Metallogenic UPMC Univ., Paris: DEA in Geochemistry USTHB Univ., Algier: DES in Mining Geology Object of specialization: Lead and Zinc Ores	Eng. 2/3 French	Coordinator of non-ferrous mines. Supervise activity of lead-zinc and mercury mines.	1 Publication	National Company of non-ferrous mining products and useful substances (ENOF)
5	3	1	ALGERIA	<u>Raihana</u> <u>HADDAD</u>	F/43	Cite Djenan Ben Omar Br6 n°93 Kouba - Algiers Tel: 00 213 21677120 Fax: 00 213 21677120 E-mail: h_raihana@yahoo.com	Algiers University, Faculty of Sciences: DEA in Geology	Eng. 3 French 1 Arab. 1/2	• Coordinator of actions for reform in mining sector . • Mining Geologist: Mining consultant advisor for Ministry of Energy and Mines. • General Director of Mines.	Different Seminars and Conferences in France, URSS, USA, Australia, Japan, South Africa.	Ministry of Energy and Mines - Algiers
6	4		ALGERIA	Hassout Guenatdi SAMIA (Renounced)	F/36	C.E.M. Ahabet Ben Korra 16300 Birkhaden - Algiers	USTHB Algiers, Univ. of Sciences and Technology: degree in Industry Chemical - Engineer -	Eng. 3 French Arab	State Engineer (6 years). Development of petrochemical.	1 Seminar	Ministry of Energy and Mines - Algiers
7			EGYPT	Yasmine Kama ABDEL WAKSOUD	F/25	38, Iran street, Dokki 111123 Giza Tel: 00 202 7947848 Tel: h. 00 202 7481922 E-mail: ykaksoud@yahoo.com	American Univ., Cairo: Certificate in Project Management (still attending the courses) Cairo Univ.: Bsc in Chemical Engineering	Eng. 1 Arab	• Establishment of the National Cleaner produc Centre for food industries • Process of establishment of the Textile Techn. Center • Chemical industries department (phosphate rocks beneficiation and synthesis into phosphoric acid)	5 Conferences in Cairo about Textile industry	Egyptian Ministry of Industry & Technological Development (MIT)

Ca ndi dat es	Part Ad mit ted	Part icip ant s	Country	Name	Sex/ age	Address	Formal education	Langua ges	Working experience and present job	Publications	Institution
8	5	2	EGYPT	<u>Galila Ahmed Ibrahim EL- BOHY</u>	F/57	92, Wadi Elneel Street, Mohandeseen - 12411 Cairo Tel: 00 202 7900144 Mobile: 00201 24254467 Fax: 00 202 7944984 E-mail: gelbohy@hotmail.com	Cairo Univ. B Sc in Chemical Engineering	Eng. 2	General Manager in Environmental Affairs since 1995. Supervise the role of the different environment sections.	Different Courses about Industrial Pollution and Environment Impact Assessment	Egyptian Ministry of Industry & Technological Development (MIT)
9	6	3	EGYPT	<u>Hesham Sayed Eid EL-SAYED</u>	M/38	2 El-Fayoum St, Heliopolis - Cairo Tel: 00 202 2666917 Tel h.: 00 202 4179481 Mobile: 00 2010 1722019 Fax: 00 202 2666920 E-mail: hesham@hailamsons.com	American Univ. in Cairo: degree in Professional Program in Project Management Ain Shams Univ. in Cairo: Bachelor of Civil Engineering	Eng. 1 Arab.	International Projects Coordinator /projects developments department (Mubark TV Studios Complex, Media Production city).	Different Conferences	Misr Sons Development SAE. - "Hassan Allam Sons" Cairo
10	7	4	EGYPT	<u>Mona Abd El Hamid FAYEK</u>	F/43	49 giza street, Po box elorman, 12612 Cairo Tel: 00 202 7946869 Tel. h.: 00 202 5727374 Fax: 00 202 7955025 E-mail: monfay@link.net monfay12@intermetegypt.com monafaye2000@yhoo.co.uk	Cairo Univ. B Sc in Chemical Engineering American Univ. in Cairo: Scientific diploma in Environmental Engineering	Eng. 1	• Senior Lead engineer of Health, safety & environment (ENPPI - engineering for petroleum)		Egyptian Ministry of Industry & Technological Development (MIT)
11	8	5	EGYPT	<u>Mohamed El-Desokey HASSAN</u>	M/41	Ain Galot Street, First District, Nasser City - Cairo Tel: 00 202 2666917 Fax: 00 202 2666920 Tel h.: 00 202 2623593 Mobile: 00 201 2311560 E-mail: mohamedhassan@allamsons.c om	Mansoura Univ., Faculty of Eng.: Bsc Civil Engineering American Univ., Cairo: Project Management	Eng. 1 Arab.	• Project Manager and Management representative - Mubark TV Studio Complex - Edfu Water Supply & Sanitary Drainage - Talkha Thermal Power Station	2 Seminar for development of upper Egypt in waste water management and Environmental	Misr Sons Development SAE. - "Hassan Allam Sons" Cairo

Ca ndi dat es	Part icip ant s	Country	Name	Sex/ age	Address	Formal education	Langua ges	Working experience and present job	Publications	Institution
12	9 6	EGYPT	<u>Mohamed</u> <u>Youssef</u> <u>KHATTAB</u>	M/40	2, Mahmoud Khairy St., 1st District - 11371 Cairo Tel: 00 202 5796590 Tel h.: 00 202 2630135 Mob.: 00 2010122116920 Fax: 00 202 5796593 E-mail: - engkhattab@hotmail.com	Ain shams Univ., Cairo: Bsc in Architecture	Eng. Arab.	Project Manager - AG Consultant Engineer of the FEI	SME in the USA Many Seminars in Cairo from 1997- 2002	Federation of Egyptian Industries (FEI)
13	10	EGYPT	<u>Mohey El Din</u> <u>Ahmed</u> <u>MAHMOUD</u> (Renounced)	M/41	5 Ebn El Roumy Street - Seven Zone - Nasr City - Cairo Tel: 00 202 2666917 Tel h.: 00 202 4037915 00 202 010172205 Fax: 00 202 2666920 E-mail: msdallam@allamsons.com	American Univ. Cairo. Introduction to Environmental Engineering Diploma in Project Management	Eng. French Arab	• Member in the executive committee for environmental and buildings projects - Contract Manager of Joint Venture Projects with foreign companies	1 Conference in Sharm Elsinh Cairo	Misr Sons Development SAE. - "Hassan Allam Sons" Cairo
14	11 7	MOROCCO	<u>Abdelkader</u> <u>AJIR</u>	M/39	236, Hay Massira C.Y.M. 10000 Rabat Tel: 00 212 681500 00 212 37680743 Tel h.: 00 212 66273817 Fax: 00 212 37770875 00 212 37772756 E-mail: dgemn@minenv.gov.ma abdo.aj@caramail.com	Mohamed I Univ., Oujda: Doctoraat in Solid Waste Mohamed Univ., Oujda: DEA in Wastewater	Eng. French Arab.	3 Staff member: Administrator in the Ministry of Environment (Solid Waste Management).	Some publications about Solid waste, & recycling activities International Seminar different Courses, and Congresses about recycling & Solid waste	Ministère de l'Aménagement du Territoire, de l'Urbanisme, de l'Habitat et de l'Environnement Département de l'Environnement
15		MOROCCO	<u>Samira AZZAOUJ</u>	F/33	180, Kenitra principale 14000 Kenitra Tel: 00 212 37 681500 Tel h.: 00 212 67 428579 Fax: 00 212 37 680741 E-mail: azaaouj@yahoo.fr	Tunis II Univ. Fac. Sci DEA in Surracial Chemical geology. IBN TOFAL Univ. Fac Sci. Kenitra: Doctorat in Heavy Metal pollution	Eng. 2/3 French Arab	• Evaluation of the pollution impact on the human health. Development projects involved in environment (education, training, research and information) • Aquatic system pollution by the inorganic pollutants	Different articles Part at the Course CS Triepte-UNEP Rabat. Several Convention, Conferences and Seminars	Health and Environment office Management of prevention of risk Environmental Dept - Rabat

Ca ndi dat es	Part Ad mit tant fed s	Country	Name	Sex/ age	Address	Formal education	Langua ges	Working experience and present job	Publications	Institution
16	12 8	MOROCCO	<u>Saadia BAHAJ</u>	F/48	05 Avenue de Tadia 10000 Rabat Mob.: 00 212 61185940 Tel.h.: 00 212 61985940 Fax: 00 212 37688731 E-mail: bahajs@mem.gov.ma	Paris Univ.: Certificate in Administration of Mines Roma Univ., La Sapienza: Ph.D in Geoch. M.ed V Univ.: Master in earth Sciences	Eng. 1/2 French Italian Arab.	• Department's responsible in Geology, Energy and Mines Environment and Normalisation.	Conventions, Seminars and Scientific visits in Tunisia, Spain, France, UK, Egypt, Finland, South Afric and Italy, (visit to the Iglesias' Mining)	Department Energy & Mines
17		MOROCCO	Yamina BOURGEOINI	F/43	University Cadi Ayyad, Faculty of Sciences and Technologies Dept. of Geology Tel.: 00 212 44 434688 Fax: 00 212 44 433170 Email: bourgoini@isg marakech.ac.ma	Marrakech Univ. Masters in Geology Tunis Univ.: D.E.A. Doct. in Micropaleontology	Eng. 2/3 French 1 Arab	• Education & Research in Sciences & Technologies • Member of the pedagogic and budgetary commission of dpt.	Different Publications Several Scientific visit and Conventions in France, Italy, Tunisia and United Kingdom	Fac. Sciences & Technol. Dept Geology Univ. Marrakesh
18	13	MOROCCO	Abdelkader EL GAROUANI (Renounced: problems with the VISA)	M/37	88, Rue Mehdi Lamniai, Hay Tank 1 30000 Fez Tel: 00 212 55602953 Tel. h.: 00 212 63829046 Fax: 00 212 55 608214 E-mail: garouani@caraimail.com	Mohamed Ben Abdelah Univ.: Doct. in Hydrology/ Remote Sensing. Tunis Univ.: Master in Applied Geology.	Eng. 2/3 French 1 Arab.	• Professor since 1996 in Applied geology, Remote Sensing and GIS. • Realization of development studies for public and private Organizations.	16 Publications Several International Seminars in France, Libya, Switzerland and Tunisia	Fac. Sciences & Technol., Dept. Earth Sciences
19		MOROCCO	Najat LAGOUILLY	F/40	Avenue Hassan II Residence Miane G16 10100 Rabat Tel.: 00 212 64958179 Fax: 00 212 37688731 E-mail: lagouilly@mem.gov.ma	Ecole Nationale Industrie minière Rabat: Diploma in Informatic Engineering Institut National de Statistique et d'Economie Appliquée - Rabat Master in Informatic Engineering	Eng. 1/2 French 1 Arab	3 years: Engineer of application 2 years: Engineer of State 3 years: Principal Engineer Responsible of conception and realization in Mines sectors	Ecole des Mines de Paris	Department Industrie and Mines

Ca ndi dat es	Part icip ant s	Country	Name	Sex/ age	Address	Formal education	Langua ges	Working experience and present job	Publications	Institution
20	14	TURKEY	<u>Cemal AKSEL</u>	M/34	Haci Ali Bey Mahallesi, Kırım Caddesi, Soyçiç Apt., No:36, Kat: 6 Daire 21 26120 Eskisehir Tel: 00 90 222 3350580 Tel h.: 00 90 2222307188 Fax: 00 90 2223239501 E-mail: caksel@anadolu.edu.tr	Middle East Univ. : MSc in SiAlON by sol-gel method Leeds Univ. : PhD in MgO-spinel ceramic composites Specialisation in Magnesium Aluminate Spinel, SiAlON Recycling of Industrial products ...	Eng. 1 Turkish	Deputy Head of Dept. at the University. Lecturing & research. Research Associate: Production of a new aluminosilicate refractory with resistance to corrosion and thermal shock.	12 Publications including journals and conferences Several Conventions in Turkey and United Kingdom	Anadolu Un., Dept. Of Materials Science & Engineering
21	15	TURKEY	<u>Filiz BAYCAN</u>	F/29	T. C. ÇEVRE Bakanligi, Eskisehir Yolu 8, Km 06530 Ankara Tel: 00 90 312 2879963 Fax: 00 90 312 2855875 E-mail: filizbaycan@hotmail.com	Atatürk Univ., Erzurum: BSc in Environmental Engineering	Eng. 1 Turkish	Environmental Engineer since 1994: policy making for solid waste minimization, recycling, preparation of regional master plans, and regulations.	Waste Management practice Technical Training-Holland Training Course on Waste Management practice-Japan	Ministry of Environment General Directorate of Environmental Pollution Prevention and Control - Eskisehir
22		TURKEY	<u>Alpagut KARA</u>	M/34	Hasan Polatkan Bulvarı Kaya Sitesi-A Blok 811/12 26470 Eskisehir Tel: 00 90 2223350580 Tel h.: 00 90 2222205981 Fax: 00 90 2223239501 E-mail: akara@anadolu.edu.tr	Leeds Univ. England: MSc in Engineering Ceramics Bath Univ. England PhD in Interfaces in glaze/body systems	Eng. 1 Turkish	Anadolu Univ. Education and research in the field of traditional and Advanced Ceramics	24 publications several Courses Congresses, and Conferences	Anadolu Un Dept. of Ceramic Engineering

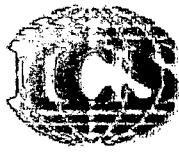
ICS/UNIDO - FORGEA INTERNATIONAL

Cagliari, 28th May 2002/GC/tm

Training Course on: " BEST AVAILABLE TECHNOLOGIES FOR THE EXPLOITATION AND RECYCLING OF INORGANIC MATERIALS. MANAGEMENT OF CONSTRUCTION AND DEMOLITION WASTE IN BUILDING INDUSTRY."
Cagliari / Iglesias, 28th May - 1st June, 2002

LIST OF TEACHERS, AND EXPERTS.

	NAME	PROFESSIONAL DATA	INSTITUTION
1	PAOLO BEVILACQUA	Associated Professor in Raw Materials Engineering.	University of Trieste, Faculty of Engineering.
2	GIORGIO BRESSI	Technical Director.	ANPAR - National Association of Enterprises working in the field of Recycled Aggregates.
3	HARRO H. DRAHEIM KOLBE	International Expert in treatment of demolition waste. Member of the TG3 Working Group of the EU for sustainable construction.	Spanish C&D waste Recycling Ind. Assoc. (GERD)
4	GUIDO ENNAS	Professor in University of Cagliari.	University of Cagliari, Faculty of Engineering. Department of Chemical Sciences.
5	SERGIO MERIANI	Full Professor in Materials Science and Technology. ICS/UNIDO - Scientific Coordinator of Area New Materials.	University of Trieste. ICS/UNIDO
6	MARIO PELINO	Full Professor of Science of Materials.	University of Aquila, Faculty of Engineering. Department of Engineering Chemistry and of Materials.
7	MARCO SURRACCO	Professor in University of Cagliari.	University of Cagliari, Faculty of Engineering. Department of Engineering and Environmental.



International Centre for Science and High Technology



FORGEA INTERNATIONAL

**"Best Available Technologies for the Exploitation and Recycling of Inorganic Materials.
Management of Construction and Demolition Waste in Building Industry"
Expert Group Meeting 28th May – June 1st 2002.
Iglesias / Italy**

Cagliari, May 24th 2002

Daily Programme

Tuesday 28th.		
<i>morning.</i>		
09,00 – 10,30	a). Registration. b). Opening by local Authorities and Forgea International.	- Representative of the Iglesias Municipality - Mr. Corbani, Forgea.
10,30 – 11,00	coffee break	
11,00 – 12,30	c). Presentation: of Participants of ICS history and programmes of Forgea history and programmes	by Participants; by Professor S. Meriani, ICS/Unido Coordinator; by Mr. Corbani, Director.
12,30 – 14,30	lunch	
<i>afternoon.</i>		
14,30 – 16,00	"Materials Cycle Management of Building Yards" I. "An introductory overview on management and exploitation of construction and demolition waste".	by Eng. Giorgio Bressi, Italy, Technical Director of ANPAR – National Association of Enterprises working in the field of Recycled Aggregates.
16,00 – 16,30	coffee break	
16,30 – 18,00	II. "Management of building yard. Technological aspects".	by Eng. Giorgio Bressi

Wednesday 29th.		
<i>morning.</i>		
09,00 – 10,30	I. "The construction and demolition waste stream. Problems to the environment when generating waste".	by Eng. Harro Draheim, Spanish C&D waste Recycling Ind. Assoc. (GERD), International Expert in treatment of demolition waste, member of the TG3 Working Group of the EU for sustainable construction.

10,30 – 11,00	coffee break	
11,00 – 12,30	II. "Handling and management of C&D waste, experiences obtained in autonomous Community Catalunya in Spain".	<i>by Eng. Harro Draheim</i>
12,30 – 14,30	lunch	
<i>afternoon.</i>		
14,30 – 16,00	I. "Quality, assessment and assurance: qualified management, role of the client, role of the demolition industry. Quality, assessment and assurance: recycling, product quality assurance; technological levels of recycling; aggregates as products".	<i>by Eng. Harro Draheim</i>
16,00 – 16,30	coffee break	
16,30 – 18,00	II. "Demolition industry. Needed policies". Building some case-studies with participants.	<i>by Eng. Harro Draheim</i>

Thursday 30th.

<i>morning.</i>		
09,00 – 10,30	I. Asbestos. Problems of inertisation.	<i>Prof. Guido Ennas, Italy, University of Cagliari, Department of Chemical Sciences.</i>
10,30 – 11,00	coffee break	
11,00 – 12,30	II. Recovering and recycling of inert stony materials from demolition.	<i>Prof. Marco Surracco, Italy, University of Cagliari, Department of Engineering and Environmental Technology</i>
12,30 – 14,30	lunch	
<i>afternoon.</i>		
14,30 – 16,00	I. Processes of low environmental impact for the treatment of minerals.	<i>Prof. Paolo Bevilacqua / Associated Professor in Raw Materials Engineering // University of Trieste.</i>
16,00 – 16,30	coffee break	
16,30 – 18,00	II. Processes of low environmental impact for the treatment of minerals.	<i>Prof. Paolo Bevilacqua</i>

Friday 31st.

<i>morning.</i>		
09,00 – 10,30	I. Recycling industry in Europe.	<i>Prof. Mario Pelino, Italy, Full Professor of Science of Materials, University of l'Aquila.</i>
10,30 – 11,00	coffee break	
11,00 – 12,30	II. Impediments and perspectives. New technologies for recycling applied to different waste streams.	<i>Prof. Mario Pelino</i>
12,30 – 14,30	lunch	

<i>afternoon.</i>		
14,30 – 16,00	I. Inertisation of hazardous waste in cement and glass matrices.	<i>Prof. Mario Pelino</i>
16,00 – 16,30	coffee break	
16,30 – 18,00	II. Case – studies.	<i>Prof. Mario Pelino</i>

Saturday, June 1st.		
<i>morning.</i>		
09,30 – 12,30	Discussion, Follow-Up and Recommendations.	