



OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



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 <u>publications@unido.org</u> for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

Final Report

Workshop

on

"POPs Destruction Technologies and Decision Support Tools for their assessment and selection"

Mahmudia, Tulcea County, Romania

28 – 29 August 2006

UNIDO Project No.: TE/GLO/04/105

UNIDO Contract Order No.: 16001206 ML/CZ

INTRODUCTION

The Workshop on "POPs Destruction Technologies and Decision Support Tools for their assessment and selection" held in Mahmudia, Tulcea county, Romania, was organized by ICS-UNIDO – the International Center for Science and High Technology of the United Nations Industrial Development from Trieste, in collaboration with the National Research & Development Institute for Environment Protection - ICIM Bucharest.

Among the different kinds of contamination, POPs, such as pesticides and PCBs, represent one of the most serious and urgent problems to be faced, because of their large diffusion in the environment on one hand, and because of their particular characteristics and properties which determine their persistence in waters and soils on the other hand. Moreover, the large amount of abandoned stockpiles of obsolete pesticides represents a further problem for many developing countries, both in terms of their management under safe environmental and human health conditions and in terms of technical as well as economic resources to be implied for their destruction.

The International Centre for Science and High Technology (ICS-UNIDO), with the aim of improving capacity building of developing countries in the development and adoption of new catalytic technologies for pollution prevention and POPs destruction and in the implementation of Decision Support Tools for the relevant technology evaluation and selection, is carrying out a programme of initiatives like workshops and meetings of experts, where methodologies and tools for a proper approach to deal with POPs related issues in developing countries are discussed and the possibility of concerted actions and joint projects are explored.

Within the ICS Work Programme for year 2006, such a strategy was strengthened and the Workshop on "POPs Destruction Technologies and Decision Support Tools for their assessment and selection", which has been held from 28 to 29 August in Mahmudia, Romania, represents an implementation of the above mentioned programme.

In the last years several non-combustion technologies, in particular those based on catalytic processes, have been developed and many of them have proved to be very promising to handle safe POPs destruction. Catalytic technologies are also a key element in up-stream strategies for pollution prevention and cleaner industrial production in developing countries. Nevertheless, the evaluation of applicability and sustainability of the different technical options represents a challenging task in the decision making processes, when a wide range of information, issues and needs are involved in the management of POPs related problems and efficient and cost effective decisions have to be taken. For these reasons, the development and adoption of new methodologies and instruments (Decision Support Tools) for facilitating decision makers to perform objective evaluations and identify suitable solutions represent a key element for sustainable and environment friendly industrial processes in developing countries.

The status of POPs pollution and the relevant prevention policies and decontamination strategies markedly differ between different regions of the world and between countries of a same region, because of the different socio-economic and industrial situation in the past and the present time. A proper planning and management of environmental problems, the introduction and implementation of suitable hazardous waste destruction technologies together with the introduction of environment friendly production processes, are the key factors to face these problems.

Some new approaches and tools are nowadays becoming available for a proper management of POPs related problems and ICS is then promoting their introduction, development and application and contributing to strengthen national capabilities with adequate programmes and initiatives in developing countries and economies in transition.

The above mentioned event was particularly focused on defining suitable common initiatives and on promoting joint projects. In order to identify and define suitable strategies/actions for the countries of the region, the Workshop was focused on the following general key topics:

- "Capacity building and knowledge transfer in the field of POPs destruction technologies CEE countries", in which the ways for promoting the introduction of effective tools and technologies for POPs destruction in the region will be explored and discussed, also identifying priorities and promoting specific projects/initiatives in the field.
- "Decision Support Tools for technology evaluation and selection", in which the
 introduction and use of DSTs in developing countries for POPs destruction
 technologies assessment and selection, will be discussed. Emerging
 non-combustion techniques for POPs treatment will be taken into account in order
 to verify their possible applicability and sustainability in the countries.

Representatives of environmental authorities, research, academic and industrial institutions as well as environmental NGOs from Romania participated in the event. Also, the focal points for the Stockholm Convention from eight CEE and NIS countries attended the Workshop.

The local organizer, National Research-Development Institute for Environmental Protection (ICIM Bucharest) is a national institute co-ordinated by the Romanian Ministry of Environment and Water Management and performs complex researches and studies in the field of environmental protection and engineering, with accent on the management of waters, air and eco zones. ICIM is one of the largest and most vigorous environmental institutions in Romania. It is composed of strong, distinctive and coherent groups of researchers.

ICIM has implemented many projects, mostly with the assistance of International Organizations. It developed fruitful co-operation with UNIDO, Phare, the World Bank, RAMBOLL - Denmark; HALCROW - United Kingdom; HASKONING - The Netherlands; EPTISA - Spain; JICA - Japan; GIB - UK etc.

The main topics of these co-operations were the development of national and local

environmental action programmes, monitoring, laboratory analyses and data processing. National reviews and reports and assessment studies regarding the improvement of environmental management at local and central level were also implemented. Monitoring of transboundary pollution and the development of environmental legislations are also among its services.

The Workshop has been held in Mahmudia, - a symbolic place - where a large part of Europe (namely a number of about 200 million people) is connected to the Black Sea, via the Danube River, affecting the ecosystems located on this large corridor.

OBJECTIVES

The main objectives of the meeting are defined as follows:

- To survey the state-of-the art of catalytic technologies for hazardous waste destruction and POPs pollution prevention and to promote their adoption in the region
- To promote the introduction and implementation of Decision Support Tools for the assessment of technologies for destruction of POPs and related hazardous compounds in the region
- To identify the main POPs related environmental problems in the region and to develop joint initiatives for their solution, also identifying the possible funding projects and schemes.

ORGANIZATION

The Workshop on "Sustainable Plastics, EDPs and the Use of Renewable Feedstocks in CEE and NIS countries" was jointly organized by the International Center for Sciences and High Technology of the United Nation Industrial Development Organization (ICS-UNIDO), with headquarters in Trieste, in collaboration with the National Research & Development Institute for Environment Protection - ICIM Bucharest. The following bodies took responsibility for the scientific and organizational aspects of the event:

Local Organizer:

Mr. Mihai Lesnic, head of Department for Air Pollution Control, Fluid Mechanics and Pollutant Dispersion in National Research & Development Institute for Environment Protection - ICIM Bucharest.

His deputy was Mr. Dan Paduraru, head of Department for Environmental Economics and Legislation in National Research & Development Institute for Environment Protection - ICIM Bucharest.

International Advisory:

Mr. Stanislav Miertus, ICS-UNIDO Area Chief Pure and Applied Chemistry, Trieste, Italy Mr. Valentin Ishchenko, Project Manager, UNIDO MEA Branch Vienna, Austria Mr. Andrea Lodolo, ICS-UNIDO Scientific Expert, Pure and Applied Chemistry, Trieste, Italy

DATE AND SITE

The Meeting was held on 28-29 August 2006 in Mahmudia, Tulcea county, Romania. All the works, accommodation and meals have been hosted by Hotel Teo, located on the Saint George branch of the Danube river.

The final Agenda of the Workshop is presented in the Annex I.

FUNDING

The total expenses for the organization were 20,481.56 €.

The contribution from ICS-UNIDO amounted to 16,881.56 € was spent for the budget items specified in the terms of reference (i.e.: accommodation, meals -full board- of key lecturers and participants, travel of key lecturers and participants, internal transport, ad-hoc DSA "pocket money", workshop materials).

ITEMS TO BE COVERED WITH THE ICS-UNIDO BUDGET

(see Annex III)

| ICS-UNIDO contribution in EURO: | (€) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Accommodation and meals at the workshop venue, including coffee breaks and visit tour in the area, for 24 participants (12 international and 12 Romanian) and for 3 drivers of the rented cars between 26 - 30 August | 8259.17 |
| Accommodation in Bucharest for two international participants (one night for each) | 93.38 |
| Refreshments during local transport | 96.90 |
| Total accommodation and meals | 8449.45 |
| Travel of 12 invited international participants: - 5820.99 € for air tickets - 61.38 € fuel for Moldavian participant car | 5882.37 |
| Local transport and airport transfers - local transport (to and from) between Bucharest - Mahmudia by rented cars: 1029.67 € - fuel for rented cars: 295.26 € - parking and bridge taxes: 24.37 € | 1349.30 |
| Daily Subsistance Allowance (ad hoc DSA "pocket money") 20 € daily per international participant | 800 |

ITEMS COVERED BY ICIM

| B) In kind contributions of the hosting institution (National Research & Development Institute for Environment Protection - ICIM Bucharest) | (€) |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Presentation projector, screen, flip charts | 1,200 |
| Personnel (Secretariat, drivers) | 1,200 |
| Room | 1,200 |
| SUB-TOTAL Local Organizer contribution | 3,600 |

TOTAL WORKSHOP BUDGET

| GRAND TOTAL | (ICS contribution + Local contribution) | 20,481.56 |
|-------------|-----------------------------------------|-----------|

The amount of $11,000.00 \in$ has already been transferred by ICS-UNIDO to the local organizer.

Thus, the remaining final balance (to be forwarded to the local organizer) is of the amount of $5,881.56 \in$ after the approval of this Final Report.

PARTICIPATION

In total-29 participants-(see Annex II) responded to the invitation letters (over 50) and attended the Workshop, as following:

- 10 key lecturers, out of which 2 were in the same time country reporters
- 8 country reporters, most of them being Stockholm Convention focal points in their countries (CEE and NIS)
- 11 other participants, representing Ministry of Environment and Water Management, research institutions, POPs elimination operators, environmental NGOs.

The keynote speakers presented 13 lectures related to the Workshop topics which were:

- international programmes and initiatives
- combustion and non-combustion technologies for pops destruction, POPs decontamination and decision support tools for their selection
- examples of UNIDO and other international initiatives in the field of POPs

destruction and remediation

Panel discussion on possible joint initiatives within UNIDO programmes in the field of POPs destruction and DSTs application

Also, a special session was dedicated to the analysis of the situation in Stockholm Convention programme implementation and of ongoing UNIDO initiatives, where proposals for joint activities were made and the SC focal points from Azerbaijan, Belarus, Bosnia & Herzegovina, Bulgaria, Czech Republic, Macedonia, Moldova, Serbia and Romania presented their country reports.

WORKSHOP MATERIALS

Each participant and lecturer obtained conference materials. The Aide Mémoire was distributed as an electronic version by e-mail. The invitation containing the main objectives of the forum and some details on the organization was distributed by e-mail or regular mail.

At the registration and at the end of the workshop, the following materials were given to all of the registered participants:

Final Agenda of the workshop

The power point presentation of the contributions, published on compact disc

Office supplies

OPENING CEREMONY

The opening ceremony was chaired by Mr. Mihai Lesnic, Chief of Department of Air Pollution Control, Fluid Mechanics and Pollutant Dispersion and POPs team leader from National Research and Development Institute for Environment Protection – ICIM BUCHAREST.

Welcome speeches were also made by:

- Mr. Stanislav Miertus, Chief of Area of Pure and Applied Chemistry, ICS-UNIDO, Italy:
- Mr. Valentin Ishchenko, Project Manager, UNIDO MEA Branch
- Mrs. Elena Popovici, representative of Ministry of Environment and Water Management in Romania, focal point for Stockholm Convention

PROGRAMME

Please refer to the attached final Agenda and time schedule (Annex I) for the details.

RESULTS AND PROPOSALS FOR FOLLOW UP ACTIVITIES

The workshop was generally considered as very successful and useful by all of the participants. Also, the balanced and interesting program of the workshop was welcomed

by the participants.

The following follow-up actions will be taken:

- The technological solutions presented in the workshop will be a good base for our projects related to POPs destruction technologies;
- The application of the presented technologies is to be assisted by the experts
 who do not belong to the countries in the region. That is why the experience of
 the foreign experts should be used;
- Further Workshops in the region are needed to increase the experience in promotion of the new projects in this field; presently also case studies.
- Joint collaboration of involved institutions (ICS-UNIDO, UNIDO/MEA/SCC Unit), and UNEP Stockholm Convention Secretariat for the promotion of emerging technologies and application of DST should be strengthened.
- It is suggested to ICS-UNIDO also to prepare the survey of combustion technologies for POP's destruction and compare them with non-combustion technologies.

Monday, 28 August

09:00-09:30 Registration of participants.

Opening Session

09:30-10:00 Welcome addresses and greetings. Presentation of the Workshop.

- Mr. Mihai Lesnic, National Research & Development Institute for Environmental Protection, Romania;
- Mr. Stanislav Miertus, Chief of Area of Pure and Applied Chemistry, ICS-UNIDO, Italy;
- Representative of UNIDO MEA Branch (Mr. V. Ishchenko);
- Representative of Ministry of Environment in Romania.

10:00-10:30 Coffee Break

Session One

INTERNATIONAL PROGRAMMES AND INITIATIVES

10:30-11.00 ICS-UNIDO mandate, strategies and international programmes/initiatives with the focus on catalytic processes applications for pollution prevention, remediation and POPs destruction (*Mr. S. Miertus, ICS-UNIDO, Italy*)
 11:00-11:30 UNIDO initiatives/programmes in the field of environmental pollution prevention and POPs destruction (*Mr. Valentin Ishchenko, UNIDO Austria*)
 11:30-12:00 Overview on POPs: POPs hazard and fate in the environment. (*Ms. Alena Pilvanova, UNIDO consultant and Ecotoxicological Centre, Slovak Rep.*)
 12:00-12:30 Discussion

12:30-14:00 Lunch Break

14:00-14:30 Implementation of the Stockholm Convention on POPs (Ms. Katarína Magulová, Stockholm Convention Secretariat, UNEP Geneva,)

Session Two

COMBUSTION AND NON-COMBUSTION TECHNOLOGIES FOR POPS DESTRUCTION, POPS DECONTAMINATION AND DECISION SUPPORT TOOLS FOR THEIR SELECTION.

Part A) General Aspects

| 14:30-15:00 | Combustion technologies for POPs destruction. Main features and applications (Mr. Ferruccio Trifiro', University of Bologna, Italy) |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15:00-15:20 | Non-combustion technologies for POPs destruction. Main features and applications (Mr. Sergej Zinoviev, ICS-UNIDO and University of Venice, Italy) |
| 15:20-15:40 | Decision Support Tools for POPs destruction technologies assessment and selection. ICS-UNIDO experiences in the field (Mr. S. Zinoviev, ICS-UNIDO and University of Venice, Italy) |
| 15:40-16:00 | Clean-up technologies for POPs contaminated soil and water and Decision Support Tools for their selection. ICS-UNIDO experiences in the field (Mr. Andrea Lodolo, ICS-UNIDO, Italy) |
| 16:00-16:20 | Semiconductor oxides as combustion catalysts (Ms. M. Caldararu, Institute of Physical Chemistry, Romania; Mr.F. Trifirò, University of Bologna, Italy) |
| | |
| 16:20-16:50 | Coffee Break |
| 16:20-16:50 | Coffee Break Part B) Examples of application: case studies |
| 16:20-16:50 16:50-17:20 | Part B) Examples of application: case studies More criteria towards a more Environmentally Sound Management of |
| | Part B) Examples of application: case studies |
| 16:50-17:20 | Part B) Examples of application: case studies More criteria towards a more Environmentally Sound Management of POP's waste. (Mr. S. Zinoviev, ICS-UNIDO and University of Venice, Italy) Remediation intervention of a PTS contaminated site: a case study. |
| 16:50-17:20 17:20-17:50 17:50-18:20 | Part B) Examples of application: case studies More criteria towards a more Environmentally Sound Management of POP's waste. (Mr. S. Zinoviev, ICS-UNIDO and University of Venice, Italy) Remediation intervention of a PTS contaminated site: a case study. Cost-benefit analysis (Mr. Andrea Lodolo, ICS-UNIDO, Italy) |

20:30

Dinner

Tuesday, 29 August

Session Three

EXAMPLES OF UNIDO AND OTHER INTERNATIONAL INITIATIVES IN THE FIELD OF POPS DESTRUCTION AND REMEDIATION

- 09:00-09:20 Overview of urgent problems, needs and initiatives in the field of environmental pollution reduction and POPs destruction in Romania and other neighboring countries (Mr. Mihai Lesnic, National Research & Development Institute for Environmental Protection, Romania)
- 09:20-09:40 POPs Stockholm Convention Implementation in Slovakia and other CEE countries (Ms. Alena Pilvanova, UNIDO consultant and Ecotoxicological Centre, Slovak Rep.)
- 09:40-10:00 The implementation of the NIP of the Stockholm Convention in the Czech Republic (Mr. Jaromir Manhart, Ministry of Environment of the Czech Republic)
- 10:00-10:30 Panel discussion on possible joint initiatives within UNIDO programmes in the field of POPs destruction and DSTs application (Mr. V. Ishchenko, Mr. M. Lesnic, Mr. Andrea Lodolo or Mr. Sergej Zinoviev, ICS-UNIDO, Italy)

10:30-11:00 Coffee Break

Session Four

SITUATION IN STOCKHOLM CONVENTION PROGRAMME IMPLEMENTATION, ONGOING UNIDO INITIATIVES, PROPOSALS FOR JOINT ACTIVITIES. COUNTRY REPORTS.

- 11:00-13:00 Reports from Countries related to Stockholm Convention Programme Implementation (10 countries, 20 min. each)
 - Azerbaijan (Mr. Namik Zeynalov)
 - Belarus (Mr. Yuri Solovjov)
 - Bosnia & Herzegovina (Ms. Nermina Skejovic Huric)
 - Bulgaria (Ms. Katya Stanke Vasileva)
 - Czech Republic (Mr. Jaromir Manhart)
 - Macedonia (Ms. Suzana Andonova)

Discussion

13:00-14:00 Lunch Break

14:00-15:10 (continued)

- Moldova (Mr. Valentin Plesca)
- Serbia (Ms. Valentina Radjenovic)
- Romania (Ms. Elena Popovici)

Discussion

Session Five

FOLLOW-UP ACTIVITIES, COMMON INITIATIVES RECOMMENDATIONS AND CONCLUSIONS

15:10-16:10 Follow-up activities development (working groups):

Project proposals development

16:10-16:30 Coffee Break

16:30-17:00 Follow-up activities development (continued):

- Presentation and discussion of results
- Definition of follow-up activities and relevant action plan

17:00 Recommendations and conclusions of the Workshop.

20:00 Dinner

Wednesday, 29 August

07:30 Departure of the participants

Workshop on

"POPs DESTRUCTION TECHNOLOGIES AND DECISION SUPPORT TOOLS FOR THEIR ASSESSMENT AND SELECTION"

Mahmudia, Tulcea County, Romania

28 – 29 August 2006

LIST OF PARTICIPANTS

| PARTICIPANTS | COUNTRY | INSTITUTION, ADDRESS |
|----------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A) ICS Representati Workshop) | tives and lecture | ers of the ICS-UNIDO (not paid from the budget of the |
| 1. Valentin ISHCHENKO | AUSTRIA | UNIDO MEA Branch, PO Box 300 A-1400 Vienna, Austria Phone 00431260263858 Fax 00431260266810 e-mail: ishchenko@unido.org |
| 2. Stanislav MIERTUS | ITALY | Chief of Area of Pure and Applied Chemistry ICS-UNIDO AREA Science Park Padriciano, 99, 34012, Trieste, Italy Tel.: +39-040-9228114 (direct) 110-116 (secretariat) Fax: +39-040-9228115 E-mail: stanislav.miertus@ics.trieste.it |

| | T | LOO IN TOO LITE ! |
|---------------------------------------|----------------------|----------------------------------------------------|
| | | ICS-UNIDO and University of Venice |
| | | Consorzio Interuniversitario Nazionale |
| | | "La Chimica per l'Ambiente" (INCA) |
| | | Via delle Industrie 21/8, |
| | E | 30175 Marghera (VE), Italia |
| 3. Sergey ZINOVIEV | ITALY | Tel.: +39 041 234 6636, 6635 |
| | | Fax: +39 041 234 6602 |
| | | E-mail: sergei@unive.it |
| | | via Rimini 8/2, Spinea (Venice) 30038, ITALY |
| | | E-mail: zinoviev@libero.it |
| B) List of international p | articipants paid fro | om the budget of the Workshop |
| | | Programme Officer |
| | | Stockholm Convention Secretariat |
| | | United Nations Environment Programme |
| | | International Environment House |
| , | | 11/13 Chemin des Anèmones |
| 4. Katarína MAGULOVÁ | SWITZERLAND | CH-1219 Châtelaine |
| | | Geneva - Switzerland |
| | | Tel: (+41) 22 9178170 |
| | | Fax: (+41) 22 7973460 |
| | | E-mail: kmagulova@chemicals.unep.ch |
| | 1 | Professor, University of Bologna, Italy |
| 5. Ferruccio TRIFIRO' | ITALY | E-mail: trifiro@ms.fci.unibo.it |
| 5.1 on agois 11ai inco | 11.221 | ferruccio.trifiro@unibo.it |
| | | Scientific Expert |
| | | Area of Pure and Applied Chemistry |
| | | ICS-UNIDO |
| 6. Andrea LODOLO | ITALY | AREA Science Park, Padriciano, 99, 34012, Trieste, |
| · · · · · · · · · · · · · · · · · · · | | Italy |
| | | Phone +39-040-9228112/8110 |
| | · | E-mail: andrea_lodolo@ics.trieste.it |
| | | UNIDO Consultant and Ecotoxicological Centre |
| | | Nadrazna 36 |
| | | 900 28 Ivanka pri Dunaji |
| 7. Alena PILVANOVA | SLOVAKIA | Slovak Republic |
| 7. Alona i ibvii (O vii | | Tel: 00421245943712 |
| | | Fax: 00421245945223 |
| | | www.ekotox.sk |
| | | National Focal Point of the Stockholm Convention |
| | | Chemicals Management Department, |
| 8. Valentina | REPUBLIC OF | Ministry of Science and Environmental Protection |
| RADJENOVIC | SERBIA | • |
| | | Address: Omladinskih Brigada 1, 11070 Belgrade |
| | | Republic of Serbia |

| | T | -harm 1201 11 21 22 571, 1201 11 21 22 572 1201 11 21 22 |
|-----------------------------------------|-------------|------------------------------------------------------------------|
| | | phone: +381 11 31 32 571; +381 11 31 32 572 , +381 11 31 32 576; |
| | | · · |
| | | Fax: +381 11 31 32 574 |
| | | E-mail: valentina.radjenovic@ekoserb.sr.gov.yu |
| | | National Focal Point of the Stockholm Convention |
| | | Expert Adviser, |
| | | Ministry of Foreign Trade and Economic Relations |
| 9. Nermina SKEJOVIC | BOSNIA AND | Musula 9, 71000 Sarajevo |
| HURIC | HERZEGOVINA | Bosnia and Herzegovina |
| | | Tel/fax: (+387 33) 552365 |
| | | Fax: (++387 33 552366) |
| | | E-mail: skeja@bih.net.ba nerabosnia@yahoo.com |
| | | nermina.skejovic@mrto.gov.ba |
| | | National Focal Point of the Stockholm Convention |
| | | Senior Expert, |
| | | Ministry of Environment and Water, 67, W. Gladstone St. Sofia |
| 10. Katya STANKE | | 1000 |
| VASILEVA | BULGARIA | Republic of Bulgaria |
| ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | Tel: +35929406026 |
| | | Fax: 00359 2 9813384 |
| | | E-mail: kvasileva@moew.government.bg |
| | | kvasileva2407@hotmail.com |
| | • | Ministry of Environment of the Czech Republic, |
| | · | Department of Waste technology and Packaging |
| | | Expert on hazardous waste, PCBs and POPs waste |
| 11. Jaromir MANHART | CZECH | Vrsovicka 65, 100 10 Prague |
| | | Tel.: ++420 267 12 2895 Mobil: ++420 776 27 87 37 (private) |
| | | Fax: ++420 267 31 1545 |
| · · · · · · · · · · · · · · · · · · · | | E-mail: jaromir_manhart@env.cz, manhart@env.cz |
| | | Project manager GEF TF053865, POPs EA Belarus |
| | | Ministry of Natural Resources and Environmental Protection of |
| | | the Republic of Belarus |
| 12. Yuri SOLOVJOV | REPUBLIC OF | 10 Kollektornaya St. |
| 12. Turi bobo vio v | BELARUS | 220048, Minsk |
| | | Republic of Belarus |
| | | Tel/fax +375 17 289 38 88 |
| | | E-mail: popsbelarus@sml,by |
| | | Advisor, POPs Unit, |
| | | Ministry of Environment and Physical Planning |
| | REPUBLIC OF | Republic of Macedonia |
| 13. Suzana ANDONOVA | MACEDONIA | Drezdenska 52 1000 Skopje |
| | MIACEDONIA | Tel: +389 2 3091 539 |
| | | Fax: +389 2 3066 929 |
| | : | E-mail: s.andonova@pops.org.mk |

| , | · · · · · · · · · · · · · · · · · · · | |
|-----------------------------|---------------------------------------|---------------------------------------------------------------|
| | | Chief of sector |
| | | State Examination Department |
| | REPUBLIC OF | Ministry of Ecology and Natural Resources |
| 14. Namik ZEYNALOV | AZERBAIJAN | B.Aghayev str. 100-A, AZ1073 Baku, Azerbaijan |
| | | Tel: (994 12) 4 92 41 73/ 4 38 85 13 |
| | | Fax: (994 12) 92 59 07 |
| | | E-mail: ekoexpert@ azerin.com, aliyev@iglim.baku.az, |
| | | Project Manager, |
| | | GEF/WB TF055875 Persistent Organic Pollutants |
| | | Stockpiles Management and Destruction Project, |
| | REPUBLIC OF | Ministry of Ecology and Natural Resources |
| 15. Valentin PLESCA | MOLDOVA | 9, Cosmonautilor str., room 614 |
| | 11102200 171 | Chisinau, MD2005, Republic of Moldova |
| | | Tel./fax: +(373 22) 226 254 |
| | | GSM: +(373) 69 120 381 |
| | | E-mail: vplesca@moldovapops.md www.moldovapops.md |
| C) List of national partici | pants paid from th | e budget of the Workshop |
| | | Counselor, National Focal Point of the Stockholm Convention |
| | | Ministry of Environment and Water Management, |
| 16. Elena POPOVICI | ROMANIA | Bd. Libertatii 12, sect. 5, Bucharest, Romania |
| | | Phone: +4021 3160421 |
| | · | E-mail: popovic@mappm.ro |
| | | Counselor |
| | | Ministry of Environment and Water Management, |
| 17. Mihaela CIOBANU | ROMANIA | Bd. Libertatii 12, sect. 5, Bucharest, Romania |
| | | Phone: + 4021 3160421 |
| | <u></u> | E-mail: mihaela.ciobanu@mmediu.ro |
| . ' | | Senior researcher I |
| | | " Ilie .Murgulescu " |
| | | Institute of Physical Chemistry of the Romanian Academy |
| 18 Monica | ROMANIA | Spl. Independenței 202, 060021 Bucharest-12, POB 194, |
| CALDARARU | | Romania |
| | | Phone/fax: (40-21)-312 1147 |
| | | Phone: (40-21)-2248895 ext.586 or 24 |
| , | | E-mail: mcaldararu@chimfiz.icf.ro |
| | | Chief of Department of Air Pollution Control, Fluid Mechanics |
| | | and Pollutant Dispersion |
| | | POP team leader |
| | | National Research and Development Institute for Environment |
| 19. Mihai LESNIC | ROMANIA | Protection – ICIM BUCHAREST |
| | | Spl. Independentei nr. 294, sector 6, cod 060031, PO 78, |
| | | Bucharest Romania |
| ' ' | | Tel; +40 21 318 20 65 |
| | | Fax: +40 21 318 20 01 |

| | | E-mail: mihai_lesnic@yahoo.com, mlesnic@yahoo.com |
|------------------------------------------|---------|-------------------------------------------------------------|
| | | Head of Environment Economics and Legislation, |
| | | POP team deputy leader |
| | | National Research and Development Institute for Environment |
| | | Protection - ICIM BUCHAREST |
| 20. Dan PADURARU | ROMANIA | Spl. Independenței nr. 294, sector 6, cod 060031, PO 78, |
| | | Bucharest Romania |
| | | Tel: +40 21 318 20 06 |
| | | Fax: +40 21 318 20 01 |
| | | E-mail paduraru@icim.ro |
| , | | Senior researcher, |
| | | POP team member |
| | · | National Research and Development Institute for Environment |
| • | | Protection – ICIM BUCHAREST |
| 21. Monica RADU | ROMANIA | Spl. Independenței nr. 294, sector 6, cod 060031, PO 78, |
| | | Bucharest Romania |
| | | Tel: +40 21 318 20 06 |
| | | Fax: +40 21 318 20 01 |
| | | Email mradu@icim.ro |
| | (| Researcher, |
| 1 | | POP team member |
| • | | National Research and Development Institute for Environment |
| |) | Protection – ICIM BUCHAREST |
| 22. Roxana PACEAGIU | ROMANIA | Spl. Independenței nr. 294, sector 6, cod 060031, PO 78, |
| • | | Bucharest Romania |
| | | Tel: +40 21 318 2006 |
| | | Fax: +40 21 318 20 01 |
| | | E-mail rpaceagiu@icim.ro |
| | | Senior researcher, |
| | | POP team member |
| ' | 4 | National Research and Development Institute for Environment |
| | | Protection – ICIM BUCHAREST |
| 23. Dan ESEANU | ROMANIA | Spl. Independenței nr. 294, sector 6, cod 060031, PO 78, |
| | | Bucharest Romania |
| · | | Tel: +40 21 318 20 65 |
| | | Fax: +40 21 318 20 01 |
| | | E-mail eseanu@icim.ro |
| | | Researcher, |
| | | POP team member |
| a. a | 2011 | National Research and Development Institute for Environment |
| 24. Cristina MUSAT | ROMANIA | Protection – ICIM BUCHAREST |
| | | Spl. Independenței nr. 294, sector 6, cod 060031, PO 78, |
| | | Bucharest Romania |
| | | TeI: +40 21 318 2006 |

| | | Fax: +40 21 318 20 01 |
|-------------------------|-------------------|--------------------------------------------------------------|
| | | E-mail cristinel@icim.ro |
| | | Researcher, |
| | | POP team member |
| | | National Research and Development Institute for Environment |
| | | Protection – ICIM BUCHAREST |
| 25. Florina ANGHEL | ROMANIA | Spl. Independenței nr. 294, sector 6, cod 060031, PO 78, |
| | | Bucharest Romania |
| | | Tel: +40 21 318 2006 |
| | | Fax: +40 21 318 20 01 |
| | | E-mail: anghelif@yahoo.com |
| | | Director, |
| | | ProAirClean incinerator |
| 26.Nicolae | DOM: | ROMANIA • TIMISOARA• Str.SULINA Nr.6B• |
| STRAMBEANU | ROMANIA | Tel: +40256306018• |
| | | Fax +40256290918• |
| | | E-mail: office@proairclean.ro |
| | | Director, |
| · . | | Environmental Experts Association |
| 00 4 1 1 0 10 10 77 | DOMESTIC . | Calea Pievnei 46-48, Sect 1 |
| 27. Arinda CADARIU | ROMANIA | Bucharest, Romania |
| | | Phone +4021 3125130 |
| | | E-mail amcadariu@yahoo.com |
| D) List of participants | funded by other F | Projects |
| | | Assistant Project Manager |
| , | | GEF/WB TF055875 Persistent Organic Pollutants |
| | | Stockpiles Management and Destruction Project, |
| | | Ministry of Ecology and Natural Resources |
| 20 1 DADDADACA | REPUBLIC OF | 9, Cosmonautilor str., room 614 |
| 28. Ion BARBARASA | MOLDOVA | Chisinau, MD2005, Republic of Moldova |
| | | "Managementul si Distrugerea Stocurilor de Poluanți Organici |
| | | Persistenți" |
| | | Tel./fax: +(373 22) 226 254 |
| | | E-mail: ibarbarasa@moldovapops.md |
| | | Project Assistant |
| • | | GEF/WB TF055875 Persistent Organic Pollutants |
| | | Stockpiles Management and Destruction Project, |
| 29.Larisa GHEORGHIEV | REPUBLIC OF | Ministry of Ecology and Natural Resources |
| 29,Lagisa OneOKOnie v | MOLDOVA | 9, Cosmonautilor str., room 614 |
| | | Chisinau, MD2005, Republic of Moldova |
| ! | | Tel./fax: +(373 22) 226 254 |
| | | E-mail: lgheorghiev@moldovapops.md |

FINAL CALCULATION - ITEMS TO BE COYERED WITH THE ICS-UNIDO BUDGET

Annex III

| andivoda | | INVOICE / | ļ | (| EXCHANGE | į | |
|------------------|--------------------|-----------|-----------|----------|----------|---------|-------------------|
| TROVIDER | EAFLAINALIUN | RECEIPT | DAIE | N N | RON/EUR) | EUR | DESTINATION |
| | Accommodation, | | | | | | |
| Alpine Tourism - | meals, coffee | | | | | | |
| Hotel Teo | breaks, visit tour | 7919213 | 8/22/2006 | 5445.99 | 3.5295 | 1542.99 | Participants |
| | Accommodation, | | | | | | |
| Alpine Tourism | meals, coffee | | | | | | |
| Hotel Teo | breaks, visit tour | 7919222 | 8/31/2006 | 23704.75 | 3,5295 | 6716.18 | Participants |
| APPS RA Hotel | | | | | | | |
| Triumf Bucharest | Accommodation | 9675040 | 8/28/2006 | 164.8 | 3.5295 | 46.69 | Katarina Magulova |
| APPS RA _ Hotel | | | | | | | |
| Triumf Bucharest | Accommodation | 9675060 | 8/30/2006 | 164.8 | 3.5295 | 46.69 | Suzana Andonova |
| Racman | Refreshments on | | | | | | |
| Restaurant | highway | 2227838 | 8/27/2006 | 230 | 3.5295 | 65.17 | Participants |
| Racman | Refreshments on | | | | | | |
| Restaurant | on highway | 2227839 | 8/27/2006 | 112 | 3.5295 | 31.73 | Participants |
| Alpine Tourism - | Workshop | | | | | | |
| Hotel Teo | materials | 7919222 | 8/31/2006 | 1413.36 | 3.5295 | 400,44 | Participants |
| ICAR Tours | Cars rental | 8523185 | 8/16/2006 | 3387.38 | 3.5295 | 959.73 | Participants |
| Autonom Services | Car rental | 4959824 | 8/23/2006 | 246.86 | 3.5295 | 69.94 | Katarina Magulova |
| Petrom SA | Fuel | ဗ | 8/30/2006 | 159.99 | 3.5295 | 45.33 | Participants |
| | | | | | | | |

| Petrom SA | Fuel | 2 | 8/28/2006 | 171 00 | 3 5205 | A8 73 | Dorticinate |
|-----------------|---------------------|---------|-----------|--------|--------|-------|--------------|
| Petrom SA | Fuel | 815 | 8/26/2006 | 169 94 | 3 5705 | AR 45 | Darticipante |
| | | | 202020 | 200 | 0.0230 | 20.07 | railcipants |
| Lukoil Romania | Fuel | 629 | 8/29/2006 | 50.05 | 3.5295 | 14.18 | Participants |
| Lukoil Romania | Fuel | 137 | 8/29/2006 | 149.96 | 3.5295 | 42.49 | Participants |
| Petrom Sa | Fuel | 51 | 8/27/2006 | 30.02 | 3.5295 | 8.51 | Participants |
| Petrom Sa | Fuel | 319 | 8/29/2006 | 100.17 | 3.5295 | 28.38 | Participants |
| OMV Romania | Fuel | 132 | 8/27/2006 | 110.03 | 3.5295 | 31.17 | Participants |
| OMV Romania | Fuel | 578 | 8/30/2006 | 66.66 | 3.5295 | 28.33 | Participants |
| Highway Company | Bridge taxes | 2660379 | 8/27/2006 | Ω. | 3.5295 | 1.42 | Participants |
| Highway Company | Bridge faxes | 2589708 | 8/30/2006 | 3 | 3.5295 | 1.42 | Participants |
| Highway Company | Bridge taxes | 2638070 | 8/29/2006 | ιC | 3.5295 | 1.42 | Participants |
| Highway Company | Bridge taxes | 2654137 | 8/28/2006 | £ | 3.5295 | 1.42 | Participants |
| Highway Company | | | | | | - | |
| | Bridge taxes | 5560409 | 8/28/2006 | 12 | 3.5295 | 3.40 | Participants |
| Highway Company | | | | | | | |
| | Bridge taxes | 5560444 | 8/30/2006 | 12 | 3.5295 | 3.40 | Participants |
| Highway Company | | | | | | | |
| | Bridge taxes | 2678425 | • | 5 | 3.5295 | 1.42 | Participants |
| Highway Company | | | | | | | |
| | Bridge taxes | 2569900 | ١, | 5 | 3.5295 | 1.42 | Participants |
| CN Aeroportul | | | | | | | |
| International | Airport parking tax | 274 | 8/26/2006 | 80 | 3.5295 | 2.27 | First group |
| CN Aeroportul | Airport parking tax | | | - | | | |
| International | | 199 | 8/27/2006 | 89 | 3.5295 | 2.27 | Second group |
| | | | | | | | |

| CN Aeroportul | Airport parking tax | | | | | | |
|------------------|---------------------|----------------|------------|---------|-------------|--------|----------------------|
| International | | 390 | 8/27/2006 | 12 | 3.5295 | 3.40 | Third group |
| CN Aeroportul | Airport parking tax | 142 | 8/27/2006 | 4 | 3,5295 | 13 | Katarina Magulova |
| | 4000 | 1 | | | | | |
| Cyclopia Moldows | hiropmon | 7327 | 9002/26/8 | 107.57 | 3 5205 | 30.48 | Valentin Plesca |
| LUNOII MICIONA | | 1301 | 0/2/1/2000 | 5 | 20.0 | | |
| | Fuel cash | | | | | | |
| Lukoil Moldova | reimbursement in € | 7309 | 8/27/2006 | 53.76 | 3.5295 | 15.23 | Valentin Plesca |
| | Fuel cash | | | | | | |
| Lukoil Moldova | reimbursement in € | 7323 | 8/27/2006 | 55.30 | 3.5295 | 15.67 | Valentin Plesca |
| General Trading | | | | | | | |
| Tour | Air Ticket | 6968278 | 8/17/2006 | 2421.43 | 3.5295 | 686.05 | Namig Zeynalov |
| General Trading | | : | | | | _ | |
| Tour | Air Ticket | 6968280 | 8/17/2006 | 2599.16 | 3.5295 | 736.41 | Valentina Radjenovic |
| NRDIEP ICIM | Air Ticket cash | Air ticket and | | | | | |
| Bucuresti | reimbursement in € | receipt | | | | 1043 | Katarina Magulova |
| NRDIEP ICIM | Air Ticket cash | Air ticket and | | | | | |
| Bucuresti | reimbursement in € | receipt | | | | 480 | Andrea Lodolo |
| NRDIEP ICIM | Air Ticket cash | Air ticket and | | | - | | |
| Bucuresti | reimbursement in € | receipt | | | | 322 | Ferrucio Trifiro |
| NRDIEP ICIM | Air Ticket cash | Air ticket and | | | | | |
| Bucuresti | reimbursement in € | receipt | | | | 190 | Alena Pilvanova |
| NRDIEP ICIM | Air Ticket cash | Air ticket and | | | | | |
| Bucuresti | reimbursement in € | receipt | - | | | 220 | Yuri Solovjov |

| 8 | Air Ticket cash |
|---------------------|----------------------------|
| nt in € receipt | reimbursement in € receipt |
| cash Air ticket and | Air |
| nt in € receipt | reimbursement in € receipt |
| cash Air ticket and | Ą |
| nt in € receipt | reimbursement in € receipt |
| cash Air ticket and | Air |
| nt in € receipt | reimbursement in € receipt |
| | Money |
| Necept | 27-28 Aug |
| | Money |
| Idiacau | 27-30 Aug |
| | Money |
| Idean | 26-30 Aug |
| ļ | Money |
| Idiacabi | 27-30 Aug |
| ļ., <u></u> , | Money |
| Receipt | 27-30 Aug |
| | Money |
| Vecelot | 26-30 Aug |
| | Money |
| Ideaph | 27-30 Aug |
| Money | Money |
| idisəsi. | 26-30 Aug |

| | | | _ | | | | | | |
|-----------|--------|------------------|--------|---------|---|----------|---|----------|-------------------------|
| NRDIEP | ~ ∑ | Pocket | Money | | | | | | |
| Bucuresti | | 27-30 Sept | | Receipt | | | - | 09 | 60 Jaromir Manhart |
| NRDIEP | ICIM | Pocket Money 27- | ey 27- | | | | | | |
| Bucuresti | | 31 Aug | | Keceipt | | | | 80 | 80 Suzana Andonova |
| NRDIEP | ICIM | ICIM Pocket | Money | | | | | | |
| Bucuresti | | 26-30 Aug | | Receipt | | | | 80 | 80 Valentina Radienovic |
| NRDIEP | ICIM | Pocket | Money | | | | | | |
| Bucuresti | | 27-30 Aug | | Kecelpt | ~ | | | 09 | 60 Valentin Plesca |
| Total | | | | | | 41235.30 | | 16881.56 | |
| | | | | | | | | | |

Note: The exchange rate applied (3.5295 RON for 1 €) is the official exchange rate of National Bank of Romania for 17 August 2006, the day when the advanced payment from ICS UNIDO was entered into ICIM bank account.