

MERCURY GLOBAL PROJECT

MERCURY AWARENESS RAISING CAMPAIGN-BRAZIL

FIRST PROGRESS REPORT AND SECOND PROGRESS REPORT

<i>Abstract</i>	1
INTRODUCTION	2
FEDERAL UNIT OF AWARENESS CAMPAIGN IN BRAZIL	2
THE OPEN SESSION	2
THE DISCUSSION SESSION	9
THE CLOSING SESSION	9
THE AWARENESS CAMPAIGN IN THE BRAZILIAN MEDIA	10
Appendix I- Program _ FolderAppendix II-Power-Point Presentations	12
Appendix II-Power-Point Presentations	13
Appendix III- Institutions Invited, confirmed presence and list of the attendee institutions/persons	14
Appendix IV- Mercury Awareness Raising Campaign in Brazilian Media	25
Appendix V- Educational Materials and others	26
Appendix VI- Mercury Awareness Raising Campaign in Brazil_ Terms Of the Reference	27

Abstract

This report describes all the activities carried out to perform the first phase of the mercury awareness campaign, at Brazilian Federal unit level. The meeting was held in, the Brazilian capital, Brasília, at the Ministry of Science and Technology Ministry (MCT) auditorium, last April 13th 2005. The main objective was to increase the knowledge and awareness of; Government, NGOs, miners associations and the general public, on the environmental and health impact associated with the current artisanal mining practices, besides developing collaboration with them for further activities. More than 65 persons were present, representing;

Governmental, non-governmental organizations, universities, research institutes and the general public. The workshop program included the MGP view of the next steps in the global project, its history, the next steps of MGP in Brazil, and the main results of the Environmental and Health Assessment performed in 2003 for two small-scale gold mines in Brazil and the objectives and strategies of the Brazilian mercury awareness campaign, inviting the institutions present to reflect about how can they help, now and in the future. The committee of the awareness campaign also presented samples of educational materials, such as folders, figures, posters, some poems in “Brazilian cordel” style and T-shirts with campaign awareness slogans and the planned materials, such as hats and calendars. The final discussion resulted in an important invitation for MGP_Brazil to be present at the MCT forum for productive clusters of costume jewelry and precious metal, including the Pará State, in May 13th, and a collaboration with FUNDACENTRO, a research institute belonging to the Ministry of Labour, in charge of Brazilian worker’s health evaluation and prevention. The awareness campaign committee is still looking for other institutional contributions, such as the communication team at the Fundação Osvaldo Cruz-FIOCRUZ, in order to improve the strategies to perform the next step, the awareness campaign at local level.

Comentário: Dont understand

INTRODUCTION

Increase artisanal mining knowledge and awareness, the Objective 2 described in the GEF activities cross-matrix, has the general objective to inform the results of the environmental and human health assessment performed in two garimpo’s areas with a population of 1,000 people to approximately 4,000 people in the Tapajós area, in order to increase the knowledge and raising awareness of miners, Governments, NGOs and the general public on the environmental and health impacts associated with the current artisanal mining practices. The campaign will, therefore, multiplying the number of people and communities aware of the environmental and health impact on their habitat.

In order to reach that general objective, the awareness campaign will be performed at two different levels, in the top-down approach:

- a) at Brazilian Federal unit, for the government institutions and academic levels, and;
- b) at local level, in the Itaituba municipality and in garimpo’s areas, mainly, in the São Chico and the Creporizinho garimpos.

FEDERAL UNIT OF AWARENESS CAMPAING IN BRAZIL

The first phase of the mercury awareness campaign, at Brazilian Federal unit level, it was held in Brasília, the Brazilian capital, at Ministry of Science and Technology Ministry (MCT) auditorium, at April 13th 2005. In this opportunity was shown all the educational materials developed by Executive Group, formed by CETEM (coordination), Evandro Chagas Institute (IEC), Federal University of Pará State (UFPA), Environment, Science Technology Secretary of Pará State (SECTAM), Itaituba Municipality and Gold Miners of Tapajós Association (AMOT).

THE OPEN SESSION

The chairman of this session was the Assistant of the Country Focal Point, in Brazil, Dr. Roberto C. Villas-Bôas, who invited the authorities to the opening session. The session was opened by the MGP_Brazil Focal Point and CETEM’s Director, Dr. Adão B. da Luz. After, Dr. Claudio Scliar, Adjunt Secretary of Geology, Mining and Mineral Resources of Ministry of Mining and Energy, stressed the importance of the project and the awareness campaign and called attention on the (i)legal situation of the Brazilian small scale gold miners.

Dr. Stephen Metcalf, representative of PCU, Dr. Pablo Huidobro, presented the Global Mercury Project strategies, including for the awareness campaign and the Technical Demonstration Units. He

accentuated that the MGP is going ahead and that the actual phase of the project requires intervention in the studied areas.

Dr. Carlos Oiti, the MCT's Research Institutes General Coordinator, represented, the Ministry of Science and Technology, Dr. Eduardo Campos. He emphasized the CETEM's position among the top ten Technological Institutes in Latin America and wished success to the awareness campaign, as well as to the event in Brasília.

Dra. Gisela Forantini, representing ANA (the National Water Agency) congratulated all responsible for the project, and Dr. Ronaldo Lima, representative of SECTAM- Pará State, stressed the importance of the project and the need of the environmental responsible processes in the small-scale gold mining in Pará State.

Dr. Sérgio Aquino, Secretary of Environment and Mining of Itaituba Municipality, representative of the Major of Itaituba clarified the expectations of the municipal on the awareness campaign as well as the desire to follow the campaign as a partner of the mercury global project. He questioned the feasibility of the TDU (showed by Dr. Metcalf) considering the known very bad conditions of the roads into the Tapajós Gold Mining Reservoir, at least during the raining season (December-May). He suggested a fixed unit as a better option.

Mr. Ivo Preto, President of the Small-scale Gold Miners Association, showed his hope in going along with the project in this and the next phases and expressed the gold miners' expectations about the technical assistance for higher gold production using an environmental and occupational friendly processes.

Finally, the Brazilian Hg awareness campaign coordinator, Dra. Zuleica Castilhos, thanked all the audience for their presence and interest, and closed the open session and called the first technical presentation.

Some pictures of the open session are shown bellow.



Luz and Dr. Ronaldo Lima (SECTAM).

Figure 1.
Dr. Carlos Scliar (MME) is speaking. This picture also shows, from the left to the right, Mr. Ivo Preto (AMOT), Dr. Sérgio Aquino (Itaituba Municipality), Dr. Adão B. da

Comentário: Do you mean during the rainy season? In which case you could write "at least during the rainy period during December to May"



Figure 2. Dra. Gisela Forantini, ANA representative, on the right.



Figure 3. In this picture, it can be seen part of the audience attending the awareness campaign meeting in Brasília.



Figure 4. The open session.



Figure 5. Dra. Zuleica Castilhos, the coordinator of awareness campaign, closing the open session.



Figure 6. Dr. Saulo Rodrigues-Filho presenting the mercury environmental impacts in garimpos areas, São Chico and Creporizinho.



Figure 7. Dra. Iracina de Jesus presenting the human health impacts by mercury exposure in garimpos areas, São Chico and Creporizinho

The full program was presented in a special folder designed by the CETEM team, and it is shown in Appendix I.

The first presentation was made by Dr. Roberto C. Villa-Bôas, who presented the history and the future of the MGP in Brazil and gave to the audience a CD video, with presentation of the MGP.

Dr. Saulo Rodrigues-Filho made the second presentation. He showed all the results of the environmental assessment and the distinct patterns of mercury contamination between two small-scale gold mining areas studied in Brazil.

Dra Iracema de Jesus gave the first presentation of the afternoon.. The presentation concerned the results of human health assessment in the same areas.

Dr. Armin Mathis presented social and economics aspects of the local population in the studied areas.

All the presentations are shown in Appendix II, except for the presentation of Dra. Iracema Jesus. Her presentation will be sent to you as soon as possible.

MERCURY AWARENESS CAMPAIGN

Since this event is the Federal unit awareness campaign, the awareness campaign is described below. The coordination presented the possible strategies for calling attention of the local population to the educational materials produced, presented the replicable educational materials and invited all those present and their institutions to think how they can help. The main point in the presentation can be assumed as the proposed support and technical assistance for small scale gold mining activities instead of the punishment, besides the “ludic” approach for presenting the educational materials, looking for a real communication between the local population and the technical team of the awareness campaign in Brazil. The discussion was about the advantages for miners who may decide to produce gold properly. What may they gain in protecting their health and the environment, besides prevent health problems? In addition, it was proposed the need of some actions on the final gold consumers, as financial market and national and international jewelry stores, to inform and sensibilize them about the work conditions of the small-scale gold miners in Brazil. The objective is to create a special market for gold extracted by environmental and occupational responsible way.

Comentário: Not sure what you mean here

The educational material presented was the pamphlet, posters, T-shirts and “cordel” poems. It should be stressed that drawings were made by Vitor Vani, based on socio-economic study made by Dr. Armin Mathis, videos and photos were of gold miners from Sao Chico and the Creporizinho regions. There were several meetings, and suggestions for conclusion on the drawings. The importance of the girl amongst some of the boys in the mining area was realized, considering the number of children presented in those areas studied. It was also important to mention that three women who were interviewed, worked as a miner, a mining chief and a land owner, respectively, close to the São Chico area.

The language should be simple, direct and, considering the Brazilian soul, has to have humor. The author of the text of the booklet is Vera Lucia do Espírito Santo, who also elaborated the logo of the awareness campaign in Brazil and edited the folders and posters, after approval by the coordination committee. The Brazilian awareness campaign’s logo is easily recognized as gold extracted by mercury, with a yellow nugget involved by a gray one. The words written in Portuguese mean in English: Mercury in Small Scale Gold Mining: To know to Solve. In artisanal gold mining regions, mercury is commonly called “azougue”. In consequence, we decided by this statement: AZOUGUE NO GARIMPO: CONHECER PARA RESOLVER. These words are written in red.

Some pamphlets were distributed to the audience. The last page is empty, waiting for UNIDO’s suggestions of best retorts and masks.

The T-shirt will be white, with the logo of the awareness campaign in the front. All the logos of the partners Institutions (IEC, CETEM, SECTAM, AMOT, UFPA/NAEA and the Itaituba Municipal), with emphases on the UNIDO, GEF and UNDP logos, will be on the rear of the T-shirt. We intended to take 2000 T-shirts for the awareness campaign to the field. However, it was noticed that, during the discussion section, the AMOT representatives (Mr. Ivo Preto and Mr. José Leal) suggested that hats would be very welcome by the gold miners. Nowadays, we are thinking about 1,000 hats along with 1,000 T-shirts.

The posters showed the pamphlets drawings and they were put close to the coffee-break. Several persons have congratulated the coordination on drawings and the edition of posters. The same posters will be presented during the field work, at garimpos areas.

The final report of environmental and health assessment, the socio-economic report and the executive summary in Portuguese, concerning the São Chico and Creporizinho regions, were given to the audience via a CD video presentation, which made special references as to the Federal unit to the awareness campaign.

Edimilson Santini is the author of the cordel poems, which I showed in my presentation. In fact, he is an author and actor in cordel, and works intensely with FIOCRUZ and UENF (Universidade Estadual do Norte Fluminense), in disseminating the scientific knowledge to the general public. He suggested three stories: one deals with the concept of the health (the importance for the gold miners in caring of their own health), the best practice in gold mining and the advantages of the gold miners in acting properly. Cordel language is often used in educational approaches by Ministry of Health and Ministry of Education, mainly with people from North and Northeast region in Brazil.

In addition, when the cordel poems were in the panel, it was asked for a “nordestino” (person from the Northeast region) in the audience to read the poems. Mr. Washington Charles Cordeiro Santos, a miner from Mato Grosso State, a representative of COOGARIMA, read the cordel poems for us. It was a very sensitive moment in the presentation. All of the audience fell over with laughter, because its humor, but, essentially, the cordel language can express for miners that they are considered through their culture and preferences in our awareness campaign strategy. The cordel poems were the subject during the coffee break.

The awareness campaign committee has sent to the Technical Chief Adviser of MGP by Dr. Stephen Metcalf, who kindly accept to take with him, the following materials:

-folders of the meeting, with the program

-the pamphlet for local distribution

-a model of T-shirt for awareness campaign and,

-a CD with the final report of environmental and health assessment, the socio-economic report and the executive summary in Portuguese, concerning to São Chico and Creporizinho regions, with a special identification for Federal unit of the awareness campaign in Brazil.

Finally, it should be remembered that, as described in the TOR, the activities of the awareness campaign in the field are:

- Conduct awareness raising campaign for approximately 4,000 people in Tapajos, including illiterate people, with very simple drawings, and more visual than written information;
- Apply method of contacting people (individually or in small groups), and invite them to participate in the speeches, that will be illustrated by figures, photos and/or videos. The T-shirts will be given to the participants after speeches;
- Explain exposure pathways to mercury species (elemental, metallic or methylmercury), and the analysis results of total Hg in the urine, hair and blood and neurological deficiencies found in the population investigated from São Chico and Creporizinho, object of the E&H assessment;

Produce and distribute folders, calendars and posters and other replicable materials, with information about adverse effects of Hg exposure;

- Demonstrate simple methods for reducing mercury emissions and exposure;
- Demonstrate simple neurological exams to local authorities and affected people,

- Cooperate with AMOT and Itaituba municipality in the text press in folders, calendars and posters in order to improve the local language and expressions for garimpo's workers and local community understanding.
- Explain the results of environmental and health assessment in context of technical mal practices;
- Explain measures for improving general and occupational health conditions related to decreasing mercury exposure.

THE DISCUSSION SESSION

The discussion session was opened for the audience questions. Close to 70 persons were presented. The list of the presence is shown in Appendix III. It should be emphasize that the presence of the Ministry of Health, Ministry of Mining and Energy (MME), Ministry of Environment, Ministry of Science and Technology, Ministry of Labour, Ministry of Development, Ministry of Treasure, Pará State represented by SECTAM and the Itaituba Municipal, besides bank institutions (BNDES and Caixa Economica Federal), universities (UFRJ, UnB, UFPA), small-scale gold miners associations (AMOT, COOGARIMA, União Nacional dos Garimpeiros do Brasil), NGO's (Defensoria das Águas, Eco-Museu do Cerrado, Amigos da Terra, FACOME) and international agencies (OPAS, OTCA), as well as the North America Embassy, among others.

Comentário: Not sure what you mean here. Could it be just deleted?

The completed lists of the invited institutions, confirmed presence and attended institutions/persons are shown in Appendix III. The audience also signed a list-of-presence.

The main points in discussion can be summarized as follow:

Mr. Ivo Preto and Dr. Sérgio Aquino stressed their concerns about the mobile TDU due to the bad conditions of the roads at least for 6 months during the year. Dr. José Leal advised that hats are much more useful for gold miners than T-shirts, and suggested that the awareness campaign make more hats than T-shirts. Dr. Ronaldo Lima hopes that more gold mining areas look for legalization concerning the environmental question. Dra. Heloisa Pacheco (NESC/UFRJ) explained for all of the audience, that Brazilian Public Health Assistance (SUS- Sistema Único de Saúde) can treat the patients with most of the diseases, whereas the population exposed to mercury do not have any special care. Mr. Ivo Preto said that the drawings of the miners was inspired in himself (was not true, but could be, since the drawings resemble Mr. Ivo Preto). Dra Iracina de Jesus expressed opinion on the impact of the mercury contamination on riverside population, more than in garimpeiros population, due to ingestion of mercury contaminated fish. Some persons called attention about legislative forcing and the need to act obeying the laws, instead of reward someone because of that. Dr. Elzivier Guerra invited all for a Forum of Jewelry and Precious Metals that will be held in São Paulo, on 13th May as a opportunity to discuss how the small-scale gold mining in Tapajós could be seen as a cluster and may receive the supporting actions of several Ministries.

THE CLOSING SESSION

All the participants thank for the opportunity to be there.

Dr. Sérgio Aquino stressed the necessity of financial support for buying equipments and technical assistance and again, questioned on the TDU appropriateness for using in the Amazon region.

Dr. José Leal, representative of Mr. Ivo Preto, stressed the need of the technical assistance for gold miners as well as the other activities to assure them all the civil rights. Dr. Ronaldo Lima emphasized that SECTAM needs to work only in small-scale gold mining with environmental permission and stressed that

areas on the intervention by project must be legal. Otherwise, SECTAM may not be partner in next phases of the MGP. The awareness coordination tanks the audience and invite all for a continuous interest in small-scale gold mining in Tapajós and in Brazil as well and closed the works.

THE AWARENESS CAMPAIGN IN THE BRAZILIAN MEDIA (in special folder)

Radio CBN_ April, 11th Interviewer: Alves de Mello

TV Educativa_ April 13th, during the meeting in Brasília

Agência Ciência e Tecnologia (MCT news) April, 7th

Brasil Mineral On Line 203, April 8th to 15th

Jornal do Brasil (Tragédia_ Coluna Boechat_ Rio de Janeiro, national distribution) April 9th

Jornal da Ciência, April 13th

Site Monitor Mercantil, April 13th_ Ouro Negro

Jornal Correio Brasiliense, (Brasília) April 13th (full page in the journal)

Jornal O Liberal (Belém e Santarém), April 13th

Jornal O Liberal (Belém e Santarém), April 14th (second page of the journal)

Some web addresses are shown bellow:

Ouro negro
Site Monitor Mercantil | 12 de abril de 2005

Tragédia
Jornal do Brasil | 09 de abril de 2005 (Coluna Boechat)

Cetem inicia campanha de esclarecimento sobre mercúrio
Site Brasil Mineral | 08 de abril de 2005

Trabalhadores contaminados por mercúrio em reserva de Tapajós
Site Brasil Mineral | 08 de abril de 2005

Estudo comprova altos índices de contaminação por mercúrio em garimpos do Norte
Site Ministério da Ciência e Tecnologia | 07 de abril de 2005

Projeto Mercúrio Global inicia campanha de esclarecimento sobre os usos do metal em garimpos
Jornal da Ciência | 06 de abril de 2005

Acknowledgment: The awareness campaign Comitee would like to thank all the CETEM's colleagues, who works for our success and Dr. Ian Howel by English revision; the MCT's Communication Sector, Mrs. Andrea Vilhena, besides the Cerimonial Department, Ms. Liney Toledo Soares and her assistances.

Appendix I- Program_Folder (presented in CD)

Appendix II-Power-Point Presentations (presented in CD)

Appendix III- Institutions Invited, confirmed presence and list of the attendee institutions/persons

Institutions invited and confirmed presence

Workshop: Awareness Campaign in Brazil: Brasilia, April 13th, 2005

Type of institution	Institution	Representatives		
		Confirmed presence		
Governmental	Ministry of Science and Technology			
	Social inclusion secretary	Cláudia Cwyrí	1	Cluster:
	Funding and resources	Marco Antonio Ambrósio	2	GEF re:
	Funding and resources	Isa Maria Gusmão Berard	3	GEF re:
	Research Institutes Coordination / SCUP	Carlos Oití Berbert	4	Coorde
	CGEE - Strategic studies and management	Lélio Fellows Filho	5	Technic
		Prof. Jorge Nicola	6	Director
	Technologies Coordination Sector - CGTS	Elzivir Guerra	7	Analyst
	Press			
	CETEM			
	* Director	Adão Benvindo Luz	8	Focal P
		Prof. Roberto Villas-Bôas	9	Assista
		Zuleica Carmen Castilhos	10	Awaren
		Ronaldo Luiz Correa Santos	11	CETEM
		Allegra Viviane Yalluz	12	CETEM
		Luiz Roberto Martins Pedroso	13	CETEM
		Saulo Rodrigues Pereira Filho	14	CETEM
Governmental	Ministry of Mining and Energy			
	Geology, Mining and Mineral			

	DNPM - National Mineral Production Department	Antonio Fernando da Silva Rodrigues	15	Director
	DNPM - National Mineral Production Department	Kiomar Oguino	16	Sede - I
	DNPM/Pará - Departamento Nacional de Produção Mineral do PA	Terezinha Maria Cid de Souza	33	(91) 271
	CPRM-RJ	Manoel Barreto	35	
	CPRM-SGB - Brazilian Geological Survey	Carlos Schobbenhaus	17	Dr. Aga 5382; e
		Claudio Scliar	18	claudio.
Governmental	Ministry of Health			
	Health Surveillance	Guilherme Franco Neto & equipe	19	Health :
	DST/AIDS			
	Fiocruz			
	Fundacentro /SP			
	Labour Hygienist	Walter dos Reis Pedreira Filho	20	Labour
	Evandro Chagas Institute-IEC	Iracina de Jesus	21	IEC-(91
Governmental	Ministry of Environment			
	Marina Silva_ Ministry	Silvia Regina Guedes	22	Marina 1839
		Edmilson Rodrigues da Costa	23	Ministry
	IBAMA			
	ANA - Agência Nacional de Águas (National Agency of Water)	Gisela Forantini	24	Horácio
Governmental	Ministry of Development, Industry and Marketing			
		Ana Prata Girão	25	(61) 211
		Elisa Ferreira	26	(61) 211
Governmental	Ministry of Labour			
	SENAES - Secret Nac de Econ Solidária			
Governmental	Ministry of Culture and Education			
	CNPq - International Cooperation	Ainda sem nome	27	
Governmental	Ministry of Planning and Management			

	IBGE - Brazilian Institute of Geography and Statistics			
Governmental	Ministério da Fazenda			
	CEF	Carlos Augusto Mucury	28	NGO M Integral mucury
Governmental	Ministério da Previdência Social			
	DRGPS/SPS/MPS/Esplanada dos Ministerios	Paulo Rogério Albuquerque de Oliveira	29	(61) 31:
Governmental	Armed Forces Exército			
	DOC - Departamento de Obras Civas do Exército	Gen. Ítalo Fortes Avena		Amazor
Governmental	Legislative Brasília			
	Procuradoria Regional de Brasília	Alexandre Camanho de Assis	30	Federal
Governmental	State of Pará			
	SECTAM – Executive Secretary of Science, Technology and Environment	Gabriel Guerreiro	31	(91) 32:
	SECTAM – Executive Secretary of Science, Technology and Environment	Ronaldo Lima	32	Director
Governmental	Prefeitura do Município de Itaituba Itaituba Municipality			
	Mining and Environmental Secretary	Sérgio Amaro Aquino	34	(93) 35:
Representantes de Classes	AMOT - Associação dos Mineradores de Ouro do Tapajós	José Waterloo Lopes Leal	36	Assista
	Confederação Nacional dos Trabalhadores do Setor Mineral			
	Fórum Nacional dos Militantes da Saúde do Trabalhador			
	ABIPTI - Associação Brasileira de Instituições de Pesquisa	Mariângela de Araújo Póvoas Pereira	37	61) 340
	IBRAM - Instituto Brasileiro de Mineração	Marcelo Ribeiro Tunes	38	Doutor
	COOGARIMA - Cooperativa dos Garimpeiros do Rio Madeira - Rondônia	Washington Charles Cordeiro Campos	39	Respon
	União Nacional dos Garimpos do Brasil	Jane Maria Resende	40	Coorde
Universities	Centro de Desenvolvimento Sustentável – UnB (University of Brasília)			
	Núcleo de Estudos de Saúde Pública - UFRJ			
	NAEA - UFPA	Armin Mathis	41	(91) 32:
	UEMG - Design de Jóias			

	PUC - Rio - Design de Jóias			
	UnB / FT / Engenharia Civil e Ambiental / Geotecnia	Profa. Noris Costa Diniz	42	noris_d
	UFRJ / NESC	Heloísa Pacheco Ferreira	43	Neurolc
	* Instituto de Estudos Sócio Ambientais- Universidade Federal de Goiás	Luciana Gonçalves Tibiriçá	44	(62) 30!
NGO's				
	Defensoria das Águas	Maria Helena Batista Murta	45	(35) 32!
	Apoio e prevenção a AIDS/GAPA			
	Associação dos Expostos e Intoxicados por Mercúrio Metálico			
	WWF-Brasil			
	EcoMuseu do Cerrado - Instituto Huah do Planalto Central			
	(*)	Mariana Nonato da Silva	46	(62) 33'
	(*)	William Basilio de Moraes	47	
	(*)	Marcos Peres de Alcântara	48	
	(*)	Keli Conceição Pires Julio	49	
	PNUMA - Instituto Brasileiro PNUMA			
	Terceiro Setor Brasil			
	Amigos da Terra - Amazônia Brasileira	Cristine Branco	50	Public F
International agencies	UNDP/Brasil			
	OTCA - Organização do Tratado de Cooperação Amazônica	Enrique Elias	51	(61) 24!
	OPAS/Brasil - Organização Pan-Americana da Saúde	Jacira Cancio	52	55 - 61
	FACOME - Fórum Amazônico sobre a Contaminação Mercurial dos Ecossistemas	Frédéric Mertens	53	facome
	Projeto Mercúrio Global	Steven Metcalf	54	PCU re
Amazonian countries	Embaixada Americana			
	* Programa Regional de Meio Ambiente /HUB Office	Gislaine Disconzi	55	disconz
	Embaixada dos outros países amazônicos			
Mining companies	Anglogold Ashanti			
Jewelry institutions	IBGM - Instituto Brasileiro de Gemas e Metais Preciosos	Marcelo Soares	56	(61) 32!

	IBGM - Instituto Brasileiro de Gemas e Metais Preciosos	Clarisse Loureiro	57	(61) 321
Mining equipments_enterprises	Apliquim			
Brazilian funding agencies	BNDES - Setor de Meio Ambiente			
	Área Social (microcrédito/Banco Cidadão)	representative	58	
	Área de Meio Ambiente	Eduardo Cânepa	59	(21) 211
	Área de Meio Ambiente	Francisco Eduardo Rizzo	60	
Consulting	ARBS-Consultoria	Alberto Rogério	61	(91) 321

Relação Representantes de Instituições presentes ao Cerimonial do MCT em Brasília, dia 13.04.05

Tipo de Instituição	Instituição	Representantes
Governamental	Ministério de Ciência e Tecnologia	
	Secretaria de Inclusão Social	Cláudia Wirz L. Sá
	Área de Captação de Recursos	Marco Antonio Ambrósio
	Coordenação Geral das Unidades de Pesquisa / SCUP	Carlos Oití Berbert
	Coordenaria Geral de Tecnologia Setoriais - CGTS	Elzivir Guerra
	ASCAP - Assessoria de Captação de Recursos	Rita de Fátima Aragão Macedo
	CETEM	
	* Diretoria	Adão Benvindo Luz
	* Diretoria	Prof. Roberto Villas-Bôas
	* SEDS	Zuleica Carmen Castilhos
	* CPMA	Ronaldo Luiz Correa Santos
		Allegra Viviane Yalluz
		Luiz Roberto Martins Pedroso

Governamental	Ministério de Minas e Energia	
	DNPM - Departamento Nacional de Produção Mineral	Antonio Fernando da Silva Rodrigues
	DNPM - Departamento Nacional de Produção Mineral	Kiomar Oguino
	CPRM-SGB - Serviço Geológico do Brasil	Carlos Schobbenhaus
	SGM - Secretaria Geral da Mesa	Carlos Nogueira da Costa Júnior
	CNTSM - Conf. Nac. dos Traba. do Setor Mineral	Claudio Scliar
	DIFIS - Diretoria de Fiscalização	Francisco José Sadeck
	CPRM- Cia. de Pesquisa e Recursos Minerais-RJ	Manoel Barreto
Governamental	Ministério da Saúde	
	SAS / COSAT - Conselho Nacional da Saúde do Trabalhador	Thais Helena Lippel
	FUNASA - Fund. Nacional de Saúde	Marco Antonio Borba
	CGVAM - Coordenação Geral de Vigilância Ambiental em Saúde	Patricia Louvandini
	* Coordenação de Higiene no Trabalho	Walter dos Reis Pedreira Filho
	Instituto Evandro Chagas	Iracina de Jesus
Governamental	Ministério do Meio Ambiente	

	Secretaria de Qualidade Ambiental nos Assentamentos Humanos	Edmilson Rodrigues da Costa
	IBAMA	Alberto da Rocha Neto
	ANA - Agência Nacional de Águas	Gisela Forantini
		André Afonso Ribeiro
	CONAMA - Conselho Nacional do Meio Ambiente	Marcelo P. de Assis
	CONAMA - SECEX	Ruth R. Tabaczinski
	PRORISC - Projeto de Redução de Riscos Ambientais	Maria Luiza Jungles
	SQA - Secret de Qualidade Ambiental nos Assentamentos Humanos	Marília Marreco Cerqueira
Governmental	Ministério da Defesa - Ex Brasileiro	
	Departo. de Enga. e Construção / DOC, Diretoria de Obras de Cooperação	Vivian Pereira Maurer
Governmental	Ministério da Educação e Cultura	
	CNPq - Cooperação Internacional	Maialú Costa Martins da Silva
Governmental	Ministério da Fazenda	
	CEF	Carlos Augusto Mucury
Governmental	Governo do Estado do Pará	

	SECTAM - Secretaria Executiva de Ciência, Tecnologia e Meio Ambiente	Ronaldo Lima
	DNPM - Departamento Nacional de Produção Mineral do PA	Terezinha Maria Cid de Souza
	DNPM - Departamento Nacional de Produção Mineral do PA	Alexandre Trajano de Arruda
Governmental	Prefeitura do Município de Itaituba	
	* Secretaria de Meio Ambiente	Sérgio Amaro Aquino
Representantes de Classes	AMOT - Associação dos Mineradores de Ouro do Tapajós	Ivo Lubrina de Castro Preto
	AMOT - Associação dos Mineradores de Ouro do Tapajós	José Waterloo Lopes Leal
	ACPO - Associação de Consciência à Prevenção Ocupacional	Karen R. Suassuna
	ABIPTI - Associação Brasileira de Instituições de Pesquisa	Mariângela de Araújo Póvoas Pereira
	BRAM - Instituto Brasileiro de Mineração	Marcelo Ribeiro Tunes
	BRAM - Instituto Brasileiro de Mineração	José Mendo Mizael de Souza
	COOGARIMA - Cooperativa dos Garimpeiros do Rio Madeira - Rondônia	Washington Charles Cordeiro Campos

	União Nacional dos Garimpos do Brasil	Jane Maria Resende
Universidades	UnB - Centro de Desenvolvimento Sustentável	Saulo Rodrigues Pereira Filho
	NAEA - UFPA	Armin Mathis
	UnB / FT / Engenharia Civil e Ambiental / Geotecnia	Profa. Noris Costa Diniz
	UFRJ / NESC	Heloísa Pacheco Ferreira
	USP - Universidade de São Paulo	Denise P. Ruys Oliveira
	USP - Universidade de São Paulo	Robinson A M. Oliveira
	Universidade Federal de Goiás, Instituto de Estudos Sócios Ambientais	Luciana Gonçalves Tibiriçá
Não-Governamentais	ONG's	
	Defensoria das Águas	Maria Helena Batista Murta
	UNGB - União Nacional dos Garimpeiros do Brasil	Carlos Alberto da Costa Braga
	Ecomuseu do Cerrado - Instituto Huah do Planalto Central	Marcos Teles de Alcântara
	(*)	Mariana Nonato da Silva
	Instituto de Pesquisas Avançadas em Economia e Meio Ambiente - Instituto Ipanema	Ninon Machado
Agências Internacionais	OPAS/Brasil - Organização Pan Americana de Saúde	Jacira Cancio

	FACOME - Fórum Amazônico sobre a Contaminação Mercurial dos Ecossistemas	Frédéric Mertens
	Projeto Mercúrio Global	Steven Metcalf
Outros Governos	Embaixada Americana	
	Programa Regional de Meio Ambiente /HUB Office	Gislaine Disconzi
Empresas de Equipamentos	GEOS Recursos Minerais Ltda. - Geologia, Mineração, Recursos Naturais	Tadeu Veiga
Fontes de Financiamento	BNDES - Setor de Meio Ambiente	
	Área Social (microcrédito/Banco Cidadão)	Enviarão representante
	Área de Meio Ambiente	Eduardo Cânepa
	Área de Meio Ambiente	Francisco Eduardo Rizzo
Consultoria	ARBS-Consultoria	Alberto Rogério da Silva
	Consultor / particular	Sebastião Marques de Oliveira
	Consultor / particular	Sérgia Amaro Aquino
Imprensa	Correio Brasiliense	Ulisses Costa

Appendix IV- Mercury Awareness Raising Campaign in Brazilian Media

The copies of the papers are included and the originals are available at CETEM, with awareness campaign coordinator, as well as the radio and TV interviews.

Appendix V- Educational Materials and others (**FIRST PROGRESS REPORT**)

(in CD)

-Posters (pdf)

-T-shirts

-pamphlet (pdf)

Hg AWARENESS CAMPAIGN IN BRAZIL

BACKGROUND INFORMATION

The environmental and health assessment (E&HA), in Brazil, was conducted by the Centre for Mineral Technology (CETEM) with the collaboration of the Evandro Chagas Institute (IEC), under the general coordination of the United Nations Industrial Development Organization (UNIDO) and was performed in two small scale gold mining areas in the Brazilian Amazon - São Chico and Creporizinho villages, belonging to Itaituba Municipality. The results achieved were presented in the 3th Task Force Meeting in Manaus, hold in April 26-27th and in Itaituba April, 28-29th.

The health assessment part of the Global Mercury Project was designed to complement the Environmental Assessment, providing indications of the level of mercury poisoning and their health effects on Artisanal Small-Scale Gold Mining communities either by exposure to mercury vapors, by ingestion of contaminated food, in particular fish as the most accessible protein in riparian and communities, or both. Based on assessment of the pathways and bioavailability of mercury vapor and methylmercury to the mining communities, the Health Assessment combined information from biological samples associated with medical exams to evaluate the level of impact that the pollutant caused or may cause to individuals residing in “mining and environmental hot-spots”.

The results of the E&H Assessment in two gold mining areas in Brazil showed that high mercury levels have been detected all over the nearby water body close to São Chico village, including sediments (averaging 4.10 µg/g) and aquatic organisms (averaging 4.97 µg/g in fish), which showed Hg levels much higher than the WHO recommended limit, 0.5µg/g in fish. According to the present results, São Chico has shown clear indications of Hg dispersion from mining hotspots, reaching a distance at least as long as 20 km. This consists of a major environmental and health concern. The environmental factors responsible for this particular Hg behavior, marked by its high mobility, are likely to be linked to both the cyanidation attempt and pasture fires. The present results suggest that the most of fish from São Chico showed higher mercury levels than fish from Creporizinho area. Additionally, in São Chico area, the highest levels of mercury bioaccumulation in fish was shown in Traira species, a carnivorous and appreciated species for consumption by local residents, extending the environmental risk to a health issue. In addition, Hg concentrations are much higher in aboveground of vegetable produces at São Chico study area than in Creporizinho and this makes the vegetables produced in backyards of the village, a further potential pathway of Hg exposure to the population, besides fish consumption and inhalation of Hg vapor.

The general health conditions observed in both areas revealed to be very precarious, as demonstrated by extremely high incidence of malaria, parasitosis and other diseases not related to mercury exposure. Since mercury burning in open air is a common practice in both areas since at least 1989, one could realize that chronic exposure to inorganic mercury is widespread. Moreover, pasture fires over Hg contaminated soils in São Chico characterizes a further exposure route to inorganic mercury for local population.

Although Hg levels in hair samples are relatively low, as 75% of both population investigated presented Hg concentrations lower than 4 µg/g, lesser than the biological exposure index (BEI, 10µg/g), it is highlighted that the mean Hg concentration in hair samples from São Chico are the double of those from Creporizinho and there are some individuals with Hg levels in hair above the BEI. They could be considered as a critical group for monitoring.

With regard to Hg in urine, the higher exposure to inorganic mercury in São Chico is reflected by 20.2% of the gold miners with Hg levels in urine between 10 and 50 µg/g creatinine, considered as a biological limit, while in Creporizinho only 13% fall in this range. Moreover, 2.9% of the gold miners in São Chico and 1.2% in Creporizinho present Hg levels higher than 50 µg/g creatinine. This is an indication that

the gold miners in São Chico are more intensively exposed not only to methylmercury, but also to inorganic mercury, in relation to Creporizinho.

Within the control group, represented by the population not directly involved in gold mining activities, it is observed that 13.9% of the population in São Chico present Hg levels in urine higher than 10 µg/g creatinine, while in Creporizinho only 0.6% falls in this range. With regard to Hg levels higher than 50 µg/g creatinine in this group, only 1.5% of the population in São Chico falls in this range, whereas no individual in Creporizinho does.

In relation to symptoms potentially associated with mercury exposure, there is a significant incidence of metallic taste, paresthesia, tremors and palpitation in humans from both areas. As for paresthesia, an incidence in the gold miners group as high as 30% in São Chico and 50% in Creporizinho has been observed, while within the control group in both areas this incidence decreases to 1.5% and 0.5% respectively. Tremors and intentional tremors were shown by 40% and 20% of miners from São Chico, respectively; and by 60% and 76% of miners from Creporizinho. In both areas, less than 5% and 1% of non-miners population showed tremors and intentional tremors, respectively. These results strengthen the need of a continuous monitoring on the health effects within the identified critical groups. In addition to the critical groups identified by Hg levels in biological samples, there are individuals with neurological symptoms even the Hg levels are lower than the critical groups.

AWARENESS RAISING CAMPAIGN- Scope of the campaign

The 3th Meeting in Manaus suggested the formation of the Executive Group for Awareness Campaign (EGAC), integrated by several institutions as CETEM, Evandro Chagas Institute, Municipality of Itatituba (including the Health Care Secretary and Planning Secretary), AMOT, the gold miners association, University of Pará State (including NAEA) and several other government and non-government institutions in order to prepare the strategies for the awareness campaign.

The Sociological report showed that most part of the people living in São Chico and in Creporizinho was not aware of the negative environmental and health implications associated with mercury use. Part of them know that Hg could damage their health, but most of them don't know which are the adverse effects, how the mercury act adversely in human body neither how could be done for avoiding Hg exposure.

The lack of awareness, technical knowledge, support programs and information on different aspects of artisanal mining make the situation precarious. It was also revealed that the institutional weaknesses limit the capacity of Governments to carry out their regulatory functions effectively. Besides, although environmental issues are multi-sectoral, there is lack of coordination and cooperation among various relevant Government -institutions. Bureaucratic procedures within the relevant institutions force most miners to opt for illegal mining and trading activities. As such, training and awareness campaigns would go a long way to change the miner's attitudes towards adopting cleaner working techniques and enable Government institutions to institute mechanisms for efficient regulation of these activities. In addition, it is envisaged that training and awareness campaigns will enhance direct participation of women to mine production activities whose involvement are currently limited by a number of socio-cultural factors.

Increase artisanal mining knowledge and awareness, the Objective 2 described in the GEF activities cross-matrix, has activities and purposes distinct from the Objective 5, introduce and demonstrate efficient and clean technology. The general objective of this awareness campaign is to inform the results of the environmental and human health assessment performed in two garimpo's areas with a population of 1,000 people to approximately 4,000 people in the Tapajós area, in order to increase the knowledge and raising awareness of miners, Governments, NGOs and the general public on the environmental and health impacts associated with the current artisanal mining practices. The campaign will, therefore, multiplying the number of people and communities aware of the environmental and health impact on their habitat.

In order to reach that general objective, the awareness campaign will be performed at two different levels, in the top-down approach:

- c) at Brazilian Federal unit, for the government institutions and academic levels, and;
- d) at local level, in the Itaituba municipality and in garimpo's areas, mainly, in the São Chico and the Creporizinho garimpos.

TERMS OF THE REFERENCE

Awareness Raising Campaign in Brazil/Communication of Health Hazards to Small-Scale Miners in Tapajós

LOCAL LEVEL

- Undertake a local awareness raising campaign for stakeholders according to the Project Objective 2, activities 2.4 of the GEF Activities Cross-Matrix, in agreement to the itinerary given above.
- Contact the following mining communities and conduct the awareness raising campaign as described below:

Itaituba (2 days)

Creporizão (2 days)

Creporizinho (3 days)

Jardim do Ouro (1 day)

Mamoal (1 day) and

São Chico and São Domingos (2 days)

Itaituba (1 day)- to present for local official authorities (municipality and state), miners representatives and general public the results of awareness raising campaign.

It will take approximately a week to change from one to another mining area. Concluding, this awareness raising campaign will take close to 20 days.

- The awareness raising campaign will be held until November 2004 (otherwise, the wet season impedes the road traffic which make reach the garimpo's area possible only by plane, increasing the cost of the awareness campaign);
- The local awareness raising campaign will include speeches to the Health Agents from the Health Care Secretary of Itaituba city about toxicological aspects of mercury exposure.
- Conduct awareness raising campaign for approximately 4,000 people in Tapajós, including illiterate people, with very simple drawings, and more visual than written information;

- Apply method of contacting people (individually or in small groups), and invite them to participate in the speeches, that will be illustrated by figures, photos and/or videos. The T-shirts will be given to the participants after speeches;
- Explain exposure pathways to mercury species (elemental, metallic or methylmercury), and the analysis results of total Hg in the urine, hair and blood and neurological deficiencies found in the population investigated from São Chico and Creporizinho, object of the E&H assessment;

Produce and distribute folders, calendars and posters and other replicable materials, with information about adverse effects of Hg exposure;

- Demonstrate simple methods for reducing mercury emissions and exposure;
- Demonstrate simple neurological exams to local authorities and affected people,
- Cooperate with AMOT and Itaituba municipality in the text press in folders, calendars and posters in order to improve the local language and expressions for garimpo's workers and local community understanding.
- Explain the results of environmental and health assessment in context of technical mal practices;
- Explain measures for improving general and occupational health conditions related to decreasing mercury exposure.
- New approach of sampling during the awareness raising campaign:
 - Take samples of breast milk, urine of babies (and infants) and urine of miners and analyze total mercury with Lumex;
 - Measure of mercury in air (with Lumex) of indoor (houses, gold shops) and in open areas, including workplace and sites close to tailings;
 - Take samples of hair of women at reproductive age and send the samples to Minamata Disease Institute

FEDERAL LEVEL:

The Brazilian Federal unit will be performed through one workshop in Brasília, the capital of Brazil, and with presentations of the results of the Environmental and Health Assessment performed in the mining areas in Brazil in order to increase the knowledge of decision-makers about the real situation of gold miners in Brazil. Participants will come from Pará, Rondônia, Roraima and Amazonas states governments and from public and private universities of those states, where artisanal gold mining is a considerable economic activity.

Stakeholders representatives of several government levels will include:

- Ministry of Health, Ministry of Environment (including IBAMA)
- Ministry of Mining (including DNPM)
- Ministry of Education;

-Ministry of Labor, and;

-representatives of state level, including environmental secretaries.

DELIVERY PRODUCTS

Materials

Replicable educational materials, such as folders, figures, photos and/or videos; folders, calendars and posters; T-shirts and hats with slogan of the awareness campaign.

Awareness campaign – local level	
Institutions	Role of the participants
Centro de Tecnologia Mineral – CETEM/MCT	Coordenation of the awareness campaign at both levels: local and federal; visit the garimpo's areas; speeches and editing replicable released materials; coordenation of presentations in Brasilia workshop
Instituto Evandro Chagas – IEC/MS	Visting the garimpo's areas; speeches and editing replicable released materials; active participation in Brasilia workshop
Prefeitura de Itaituba	Supporting with its Health and Planning Secretaries, active participation in Brasilia workshop
Secretaria de Saúde de Itaituba	Integration with the Awareness campaign; share the logistic in the field; active participation in Brasilia workshop
Secretaria de Planejamento de Itaituba	Participation in the strategies formulation and supporting in text format/language for folders and other replicable released materials; active participation in Brasilia workshop
Associação dos Mineradores de Ouro do Tapajós – AMOT	Participation in the strategies formulation and supporting in text format/language for folders and other replicable released materials; communication with miners; active participation in Brasilia workshop
Núcleo de Altos Estudos da Amazônia – NAEA/UFPA	Participation in the strategies formulation, supporting in text format/language for folders and other replicable released materials; active participation in Brasilia workshop
Pará governments secretaries (SECTAM, SEICOM and others)	Supporting in text for folders and other replicable released materials; active participation in Brasilia workshop

